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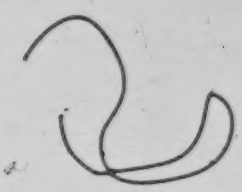

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A FOLLOW-UP STUDY OF THE GRADUATES FROM THE FUNDAMENTALS IN OPERATING ROOM NURSING PROGRAM UNIVERSITY OF ALBERTA HOSPITALS MAY 1981 TO JULY 1985

BY

REGINA ANN LEONARD

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

SPRING, 1986

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ISBN 0-315-30305-0

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DEGREE: Master of Education

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Reseach for acceptance, a thesis entitled A Follow-Up Study of the Graduates From the Fundamentals in Operating Room Nursing Program, University of Alberta Hospitals, May 1981 to July 1985 submitted by Regina Ann Leonard in partial fulfilment of the requirements for the degree of Master of Education.

Supervisor

Date: 22 April 1986

ABSTRACT

The purpose of this study was to obtain information from the graduates of the "Fundamentals in Operating Room Nursing Program" and from their first Operating Room Supervisor following graduation. Data were collected using questionnaires designed for each group of participants in the study. Among the variables addressed in the graduate questionnaire were demographics, pre-program education and employment background, relevance of the program elements for preparation for operating room nursing practice, areas for modification, post-program employment, and continuing education activities. The supervisor questionnaire was designed to reflect the relevance they place on selected skills and qualities in a "junior" staff nmember, their perceptions of the graduate's performance of these skills and display of qualities, and their perceived need for operating room nursing education programs.

Statistical analysis were applied to the data from 41 completed graduate questionnaires (85% of return), and from 10 completed supervisor questionnaires (100% of return). Analysis included frequency and percentage distribution, mean ranking, and content analysis of the open ended comments.

The major findings from the graduates' responses indicated that the program fulfils its objectives; few suggestions were received for program changes. The graduates expected that the program experience would enhance their opportunities to obtain operating room employment. The responses indicated that 75% of the graduates obtained O. R. employment with the majority located in larger hospitals (over 500

beds). Perioperative patient visits were rated low in importance in meeting learning needs in the program. There was a perceived need for advanced operating room nursing education. In repsonse to the question of changing the educational requirements for entry into nursing practice, from R. N. to B. Sc. N., the level of agreement was low. The majority of the graduates did feel that this program was worthy of being offered for university credit.

The major conclusions from the supervisors' responses indicated that they perceived the graduate's performance as above average in the selected skills and qualities, and their overall performance was viewed as being superior to that of staff who have not taken the program. They felt that the "Fundamentals in Operating Room Nursing Program" should continue and that advanced programs are needed. They indicated that they are satisfied with present levels of basic nursing education and did not perceive a need to change the educational requirements for entry into nursing practice from R. N. to B. Sc. N.

ACKNOWLEDGEMENTS

I offer sincere thanks to all who assisted me in the development and completion of this work, especially:

Dr. J. E. Seger, my advisor, whose patience, encouragement and realistic attitude was appreciated.

Donna Lynn Smith, Director - Nursing Service, University of Alberta Hospitals for assisting me in choosing a topic of study.

Darlene Elliot, Research Consultant, for helping me to set realistic expectations and time lines.

Dr. Peggy-Anne Field, Faculty of Nursing and Dr. D. A. MacKay, Department of Educational Administration for previewing my work and acting as my committee members.

Operating Room Nursing Personnel and Department of Nursing Education and Research Staff, Unviersity of Alberta Hospitals, for their support and encouragement.

Chris Prokop, for her assistance in computing the statistics.

Joan Eliuk, for her excellence and expertise as a manuscript typist.

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CHAPTER I

STUDY DESCRIPTION

Introduction

Prior to the mid-1950s nursing curricula and preparatory skills were mandated by nursing licensure boards. Since that time a number of changes have been taking place in the area of nursing education. Shorter programs in hospital-based nursing schools, emphasis on baccalaureate education, and an increasing knowledge base have, in essence, led to a shift in the focus of nursing curricula.

Today, the overall goal in nursing education is to produce nurses who are generalists rather than specialists. As a result of this trend to produce generalists certain specialty areas are being eliminated from, or abbreviated to observational experience only, in a number of nursing curricula. The Operating Room (O. R.) is one such specialty area. Figure 1 briefly summarizes the O. R. experience for students in the Alberta nursing programs (1982 figures).

O. R. nursing does however require specialty skills, and extended and costly orientation programs are required to prepare inexperienced graduates to function safely, effectively and competently at a basic skills level. Nursing supervisors prefer, therefore, to hire nurses with O. R. experience. The problem is not a critical one in larger centers as they usually attract experienced nurses from other centers. Smaller centers, though, appear to be having serious difficulty in this area. This is evidenced by a number of requests to the larger teaching centers from the outlying hospitals to provide O. R. experience and

Figure 1

Operating Room Experience Offered in Nursing Curricula in Alberta Schools of Nursing: 1982

School	Length of Program	Length of O.R. Experience	Type of Experience
Red Deer College	2 years	Several follow-through experiences	Observation
University of Alberta	4 years (generic) 2 years (post-basic)	One day None	Observation --
Foothills Hospital	120 weeks	6 weeks	Participation
University of Alberta Hospitals	30 months	2 weeks	Participation - observation
Mount Royal College	88 weeks	Several follow-through experiences	Observation
Misericordia Hospital	112 weeks	4 weeks (elective)	Participation
University of Calgary	4 years	None	--
Royal Alexandra Hospital	2 years, 4 months	None	--
Lethbridge Community College	88 weeks	6 days	Participation - observation
Grant MacEwan	86 weeks	1 day	Observation
Medicine Hat	30 months	4 - 6 days	Observation
University of Lethbridge	2 years (post-basic)	None	--

programs for their staff members. These experiences range in length from one day to several weeks depending on the requesting agencies perceived needs and time.

It is somewhat doubtful that these and the minimal basic student experiences are adequate to prepare nurse participants to function safely in their O. R. environments. As the effects of the changing curricula are felt, there is a very real concern as to the quality of O. R. nursing care that the patients will receive.

As a large teaching hospital complex, the University of Alberta Hospitals accepts a responsibility to address the needs of the broader community. In recognition of the problem a pilot project was launched in May 1981 offering a 12 week program in the basics of operating room nursing skills. The project was applauded as a success from the perspectives of learners, instructor, administration, operating room staff, and supervisors. With some modification the project was accepted and the "Fundamentals in Operating Room Nursing Program" was instituted in September 1982 as a full time post graduate program for Registered Nurses who want to acquire basic O. R. nursing skills. Three programs are offered each year--January - April, May - July and September - December. Ten programs have been completed and one is presently in progress. At the conclusion of each program a course and instructor evaluation are completed by each student who completes the requirements for graduation. To date, no formal follow-up study of the program has been undertaken.

Purpose of the Study

The purpose of this study was to obtain information from the graduates of the "Fundamentals in Operating Room Nursing Program", and their first O. R. Supervisor following graduation. This information would be used in guiding future program revision and planning activities, and as a support for justification of continued administration and implementation of the program. The conclusions and recommendations from this study are to be shared with the education and administration personnel involved with the program.

The development of the variables addressed in this study was the result of discussion and consultation with management and instructional personnel at the University of Alberta Hospitals. These included a Director of Nursing Service and Education, a former instructor for a post graduate program in O. R. skills and management and a former instructor for the program under study. Additional input was obtained from a review of available final evaluations done by the graduates at program completion.

Objectives of the Study

The results of these discussions and review have led to the following objectives for this study:

1. To obtain a demographic profile of the graduates.
2. To obtain an educational profile of the graduates.
3. To obtain a pre-program employment profile of the graduates.
4. To ascertain the influencing factors which contributed to the graduates' taking the program.

5. To determine the graduates' response to the individual elements of the program.

6. To assess the relevance of the individual elements of the program's theoretical and clinical content, in meeting the graduates' learning needs.

7. To assess the graduates' perception of their transition from the program to the workplace.

8. To assess areas of the program for modification, revision, deletion, and addition.

9. To assess areas of conflict, with other learners, for experience in the clinical setting.

10. To obtain a post-graduate O. R. employment profile.

11. To determine the graduates' post-program involvement in continuing education.

12. To determine the graduates' first O. R. Supervisors' perceptions of the graduates' preparation for O. R. nursing (with graduate's permission).

13. To determine any unexpected outcomes from the program.

Significance of the Study

A follow-up study can provide a useful source of information about former students' perceptions of the outcomes of a program, and their employer's perceptions of their preparation for, and adaptation to the role of employee. It is a means by which to obtain information on how the program prepared the participants for employment, career opportunities and interpersonal relationships, and how they are continuing with their professional development. The information

obtained may also be utilized as a guide for other program planners in developing, designing and evaluating their programs.

Definitions

In order to facilitate ease of understanding the following terms are defined according to their meanings for this study.

Registered Nurse	is a graduate from an approved school of nursing who holds active membership in an Association of Registered Nurses.
Nursing Process	is a systematic approach to nursing practice using problem-solving techniques. It consists of four components: assessment, planning, intervention, and evaluation. It is a dynamic and continuous process for guiding nursing actions (Groah, 1983).
Operating Room Nursing	consists of nursing activities performed by the professional operating room nurse during the preoperative, intraoperative, and postoperative phases of the patient's surgical experience (Groah, 1983).
Surgical Specialty	refers to a specific type of surgical service (e.g., general surgery, orthopaedic surgery).

Delimitations

At the onset of this study, the only participants were the graduates of the "Fundamentals in Operating Room Nursing Program". No attempt was made to contact those who dropped out of the program. Permission was requested from all of the graduates, to contact their

first O. R. supervisors, following this program, in order to determine their perceptions of the graduates' preparation for O. R. nursing practice.

Limitations

The findings from this study reflect the views of the representatives of their particular groups. There is no population generalizeability. The graduate questionnaire was developed from the variables as outlined in the objectives of the study. Included are demographics, preprogram education and employment, influencing factors, program elements, postprogram employment, and continuing education. The supervisor questionnaire was designed to depict basic preparatory skills and qualities upon which "junior" operating room nurses are usually evaluated. A pilot study was undertaken to test the graduate questionnaire.

Summary of Fundamentals in Operating Room Nursing Program

Purpose of Program

The "Fundamentals in Operating Room Nursing Program" is designed to prepare Registered Nurses, who have little or no O. R. nursing experience, to function safely and efficiently at a basic level of nursing competency in the O. R.

Objectives of Program

The objectives of the program are to prepare nurses who can:

1. Integrate the nursing process into the care of the patient requiring surgical intervention.

2. Demonstrate skill and dexterity in the performance of operating room nursing.

3. Demonstrate skill in the ability to apply theory to the clinical setting.

4. Integrate communication theory into nursing as it relates to the Operating Room.

5. Integrate legality and ethics in professional behavior in the Operating Room.

6. Consistently demonstrate a value system showing attitudes of caring, accountability and responsibility.

7. Demonstrate self-directedness in professional and personal growth.

Description of the Program

The program provides nurses with detailed instruction in the basics of operating room nursing. This includes four weeks of instruction in theoretical concepts, and application of these concepts to clinical practice. Theoretical content is organized under the following headings:

1. Introduction to the Operating Room Guidelines and Procedures.
2. Operating Room Equipment and Supplies.
3. Infection Control and Sterilization.
4. Operating Room Nursing and Patient Safety.
5. Wound Management.
6. Anaesthesia and Recovery Room.
7. Surgical Specialties.

Each learner completes an eight week clinical rotation, and spends a minimum of two weeks in each of the surgical specialties--general surgery, gynaecology and orthopaedics; a minimum of one week in plastic surgery and urology; and one week of student-selected experiences. These services are in keeping with the types of basic surgery which those who are likely to return to smaller centers will encounter. Additional experiences are negotiated and arranged on an individual basis throughout the program.

The program is 12 weeks in length, a time period considered necessary to allow the nurse to assimilate both the theoretical and the clinical knowledge essential for basic O. R. nursing competency. A two-week class block during which students are taught basic theory and principles, is followed by alternate clinical practice and classroom teaching.

Instruction and guidance is provided by the program instructor and a variety of resource personnel. In addition, there are elements of individualized goal setting to help meet the specific needs of learners returning to other institutions.

Student Selection Criteria

Students are selected on the basis of two work references, work location, need for program, and level of education. All must be registered nurses or graduates who have or are eligibile for Alberta nursing registration. Seven students are chosen for each program session. This ensures that each learner will receive adequate close supervision in the specific surgical specialties chosen for the program.

Evaluation

Students are evaluated on four quizzes and one final examination, a formal term paper and two presentations related to surgical specialty procedures. An average of 70% is necessary for successful completion of the program.

A satisfactory clinical performance, as determined by self-evaluation, theatre evaluations completed by the Unit Supervisors and a final evaluation by the instructor, must be maintained. A four week clinical probationary period is allowed.

At program conclusion, the students complete a final evaluation of the program, the instructor and their own clinical experiences. These are submitted to and discussed with the program instructor in the last week of the program.

Professional Qualifications of Instructional Personnel

The program is coordinated by the Department of Nursing Education and Research. The instructor facilitates the theoretical and clinical experiences for the students.

The instructor is a baccalaureate prepared registered nurse with extensive O. R. nursing experience and a post graduate O. R. technique and management course. The guest lecturers are unit supervisors from the O. R. surgical specialties, surgeons, anaesthestists, and the O. R. inservice coordinator.

Organization of the Thesis

This chapter includes a discussion of the perceived need for a post graduate specialty program in operating room nursing. The purpose, objectives, significance, delimitations, and limitations of the study

were outlined; and a brief summary of the program under study was presented.

Chapter II presents a review of the relevant literature which assisted in developing the model and conceptual framework for this study.

Chapter III is a description of the methodology of the study. It includes a description of the subjects, the instrumentation and the procedures used.

Chapter IV comprises the analysis of the data, and in Chapter V conclusions and recommendations are presented.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The review of the literature, presented in this chapter, provides the guidelines and framework for the design, plan and implementation of this study. The review consists of five sections. In the first section, the concept of program evaluation is defined and discussed. In the second section, evaluation theories and models are analyzed. In the third section, approaches to evaluation are discussed. In the fourth section, the utility and efficacy of follow-up studies as a retrospective evaluation strategy are described. In the fifth section, relevant evaluation studies within nursing education are reviewed.

Program Evaluation

Evaluation Defined

Berk (1981) observes that one of the earliest definitions of evaluation comes from the works of Tyler (1942). Tyler defines evaluation as "the process of determining whether the objectives of a program have been achieved--congruence between performance and objectives" (p. 4).

The Phi Delta Kappa Commission on Evaluation (in Wentling & Lawson, 1975) defines evaluation as "the process of delineating, obtaining, and providing useful information for judging decision alternatives" (Stufflebeam et al., 1971, p. 40). This definition identifies the role of the evaluator as one who processes information, but is not directly involved in decision-making.

Worthen and Sanders (1973) define evaluation as "the determination of the worth of a thing. It includes obtaining information for use in judging the worth of a program, product, procedure, or objective, or the potential utility of alternative approaches designed to attain specified objectives" (p. 19). They view the evaluator as being actively involved in the processing of information and in the recommendations for actual decision-making.

They offer a brief summary of several definitions from various evaluation experts: Stake (1967), for description and judgement; Scriven (1967), to assess worth and merit; Provus (1969), to improve, maintain or terminate a program; and Hammond (1969) and Tyler (1942), to determine the congruence between performance and objectives.

It appears evident that no one accepted definition of evaluation exists. One commonality does exist, though, that of evaluation as a foundation for decision-making.

Program Evaluation Defined

Program evaluation is evaluation focused on collecting specific information relevant to a specific program (Worthen & Sanders, 1973). In essence this means estimating the program's worth, assessing its strengths and weaknesses, and making decisions as to its value, permanency and saliency.

The types of information collected in the course of an evaluation is dependent on the purpose which the evaluation is to serve. The purposes for evaluation as identified by Anderson and Ball (1978), are to contribute to decisions about program installation, continuation, expansion, certification, or modification; to obtain evidence to rally

either support or opposition to a program; and to contribute to the understanding of the basic psychological, social and other processes.

Alkin and Fitzgibbon (1975) state that once a program is implemented, monitoring, modification, patching and poking are needed to ensure that it works as well as possible. This implies provision of information, about the program's progress, to those responsible for running and improving the program.

Scriven (1967) has aptly applied the term "formative" to this type of evaluation. The purpose of formative evaluation is to improve, and is best suited to program development and modification. In contrast, the term "summative" has been applied to evaluation for assessment of the program's success in reaching its goals. It is considered a terminal or final evaluation of the outcomes of the program.

Stufflebeam (1971) distinguishes evaluation for decision-making as formative, and evaluation for accountability as summative. The differentiation is not always clear. Alkin (1969) offers the suggestion that formative evaluation helps to "get the bugs out" of a new program, whereas summative evaluation is undertaken when a program is "stable" (p. 7).

Since this study has as one of its several objectives to ascertain strengths and weaknesses within the process and outcomes, elements of both formative and summative evaluation will be evident.

Evaluation Theories and Models

Evaluation is not a new concept, as is evidenced with reports of civil service exams in China in 2000 B.C., and in verbally-mediated evaluations of learners by the early Greek philosophers. In the late

nineteenth and early third of the twentieth centuries, standardized evaluation techniques became popular in the North American school systems. The accreditation movement of the middle third of this century had a powerful effect on the educational system. With this movement came an increased demand for educational evaluation, especially educational outcomes. It was not until the 1960s, though, that evaluators became aware of the need to implement a judgemental component into the value of the process of education (Worthen & Sanders, 1973).

This era in evaluation is seen as being characterized by judgement orientation and conceptual framework development for evaluation (Scriven, 1967). The evaluators in their current approaches are interested in gathering information for decision-making, in addition to measurement of objectives, standards and worth. Several models, each with their own strategies, similarities and differences, have been devised to implement the current approaches and concepts of evaluation.

The evaluation model, as defined by Green and Stone (1977) in Ediger, et al. (1983), is "an analytical plan or framework which guides thought or structures the universe comprising the field in which the evaluator functions...(p. 195). A model provides direction, indicates the evaluation parameters, supplies a systematic approach, and specifies relationships of parts (Ediger, 1983).

Worthen and Sanders (1973) classify evaluation models into three categories. First, the judgement-strategy model in which the evaluator makes judgments based on data analysis. The works of Cronbach (1963), Scriven (1967) and Stake (1967) fall into this category. Second, the decision-management model in which information is processed by the

evaluator and then submitted without judgement, to the decision makers. The works of Stufflebeam (1971) and Alkin (1969) are characteristic of the decision-management models. The third category is the decision-objective model. In this model the role of the evaluator in making judgements is uncertain. Specifically this model bases decisions on the achievement of objectives. The works of Hammond (1969), Provus (1969) and Tyler (1942) are placed in this category.

The works of the developers of these models have been summarized by Worthen and Sanders (1973). One work from each category is briefly described here.

Stake's (1967) judgement-strategy model uses a formal inquiry approach to collecting data and information from various audiences, in reference to their outcomes. This is accomplished by dividing data into a description (intents and observations) and judgement (standards and judgements) dimension. Information is collected on these dimensions in terms of antecedents (pre-entry condition), transactions (what occurs during program) and outcomes (consequences of education). The data on observations collected in each dimension is analyzed in terms of its congruence with the set standards. The model requires that specific objectives and standards be designed, thus allowing for a fairly high level of objectivity on the part of the evaluator.

Stufflebeam's (1971) decision-management model has as its basis the provision of information to decision makers. This model consists of four stages: context, input, process, and product. Context evaluation focuses on decisions for planning. Its purpose is to assess and determine objectives for improvement based on identification of

problems. Input evaluation focuses on programming decisions, in essence planning appropriate structure, project design and resources in order to achieve the program objectives. Process evaluation deals with implementation decisions, and the operational control of the program. Product evaluation is used for recycling decisions, to judge and react to project attainments, to continue, to modify, etc.

This model provides information to those in charge of a program, and it allows for evaluation to take place at any stage of the program. It places little emphasis on judgements and values, and can be costly to design and implement.

Hammond's (1969) decision-objective model focuses on the definition and measurement of behavioral objectives. It includes an institutional, instructional and behavioral dimension. Although it can be time consuming and costly to define the objectives initially, once they are defined the model can make use of local personnel to carry out the evaluation process and take initiative. Again this model neglects the judgemental aspect of the evaluator.

In summary, varied models for program evaluation have been identified. Rather than trying to compare and contrast the models, in detail, the attempt here has been to heighten awareness of their utility, strengths and weaknesses in assisting with the development of an appropriate model for use in this study. The models exist, not as recipes, but rather as guidelines for program evaluation such that relevant elements from each can be synthesized into a workable model for individual evaluation projects, requirements and pursuits. There is no one model recommended for application to all situations, nor does there

appear to be any model which cannot be modified to a particular need. One commonality noted throughout this review of evaluation theories and models is that the end-product of the evaluation is decision-making.

Evaluation Approaches

Donabedian (1969), in addressing the issues involved in evaluating nursing care, classifies three approaches to evaluation--structure, process and outcomes. The evaluation of structure consists of appraising organization, administration and resource allocation. The evaluation of process consists of appraising the actual care given. The evaluation of outcomes consists of the assessment of end-results of care.

He states that choosing which approach to use for evaluation purposes will depend on agency responsibility, and the types of questions the agency feels required to ask. He indicates that there seems to be two leanings among evaluators--one for process, and one for outcomes. If the question is one of participant benefit, evaluation of process seems to be the answer. If the question is one of what good are we doing, the evaluation of outcomes seems to be the obvious answer.

Although Donabedian uses the terms structure, process and outcomes in reference to nursing care, it is felt that they can be applied to educational programs. The term structure appears usable in the context in which he applies it. Process, referring to nursing care given, would translate to educational activities. The outcomes would translate from the end results of care given, to the end results of the educational program; that is the level of competency and knowledge attainment at the completion of the program.

Meleis and Benner (1975) further addressed the concepts of Donabedian (1969) with emphasis on process and product (outcome) evaluation. They view process evaluation in terms of its purpose, to guide and enhance the program by providing information and feedback on potential or current defects, thus enabling educators to develop strategies for program change and modification. Outcome evaluation is viewed as a measurement of the end-product of the program. It may be used for comparison purposes with other programs, or with the pre-program state of the individuals involved, or for continuation-termination of a program. The views of Meleis and Benner appear to coincide with the thoughts of Scriven (1967). The process evaluation may be viewed as formative evaluation, whereas the outcome evaluation may be viewed as summative evaluation.

Bloch (1975) states that structure involves factors of the system, process examines what providers do, and outcomes are criteria derived from problems or potential problems as defined by the practitioners, researchers or evaluators. She suggests that there appears to be an increased emphasis on outcome evaluation, such that it almost seems that process oriented evaluation is no longer respectable. She states that the exclusion of process from outcome can lead to dangerously sterile results. If process is not examined, one cannot know what caused the favorable or unfavorable outcomes. An evaluation which encompasses both, she suggests, has the potential for greater impact because it allows for examination of how the actions of providers relate to changes in the recipients.

Wright (1984) in addressing the trend toward accountability in practice states that "If nursing is to develop, the practitioners must monitor the care they give, and act upon the findings, whether they be good or bad" (p. 457). The same would appear to hold true for education, and it is felt that educators need to monitor the educational requirements and activities of students, and act upon these findings. Nursing care, likely, will not improve if nursing education is negligent in its progressivity and accountability.

Waltz and Bond (1985) state "It is not sufficient to focus evaluation only on the intent to which goals and objectives are met...Ideally, evaluation in nursing education should consider inputs, processes, outcomes, and the interrelationships between the three, and their interactions with the environment in which they occur" (p. 258). Considering the cost of undertaking an evaluation in this manner, the focus for evaluation will largely be determined by consideration of cost, objectives and type of information needed.

It appears to be highly inefficient, if not impossible, to assess everything in regard to an evaluation question or objective. The main factors crucial to decisions should be considered. In addition to identifying factors, it becomes imperative and prudent to identify the audience for whom the evaluation is required.

Follow-Up Studies as an Evaluative Strategy

Good (1975), in his "Dictionary of Education", defines a follow-up study "as an organized plan for ascertaining the employment and educational status of graduates from vocational programs in order to establish the relationship between employment and the vocational

training received" (p. 15). He states that a follow-up is made to achieve one or more of the following purposes:

1. To determine the effectiveness of the guidance process.

2. To obtain a realistic picture of what lies ahead for present students.

3. To help former students to reappraise their educational and vocational plans.

4. To appraise the school's programs.

5. To obtain ideas for improving the program.

6. To obtain information that the school requires to adapt its adult education program to meet more efficiently the needs of its former students and the community.

7. Evaluation of progress of persons in jobs or training to which they have been assigned, on the basis of certain measuring instruments and procedures. (p. 15)

McKinney (1977) views a follow-up study as an accumulation of data from individuals who have had similar or comparable experiences. It implies that the individuals reflect on that experience in terms of success or failure.

Wentling and Lawson (1975) suggest that "The results of a follow-up may range from a simple survey of former learners receiving employment to a very intensive study which provides feedback from former learners regarding the appropriateness of their preparation to their career choices and plans, and the exemplary qualities or deficiencies of their educational program" (p. 124).

They suggest that the choice of who to include in the follow-up will be dependent upon the objectives of the study. The design of the study and the choice of participants must be based on a well formulated plan consisting of an overall objective and additional subordinate objectives which will further define the focus of the investigation.

Hayter (1978) states that "Recent graduates are in a singularly appropriate position to evaluate their educational program. Somewhat removed from the educational setting, faced with meeting new job expectations, they can comment realistically about the adequacy of their education." (p. 381). In addition to job responsibilities, information pertaining to professional activities and preparation for meeting unexpected demands can be useful.

Methods of Follow-Up

The most commonly used methods for follow-up studies are the personal interview, the telephone interview and the mail survey. Each method has its advantages and disadvantages which the evaluator weighs against purpose, scope, and resources available. Figure 2 summarizes and rates each method, from high to low in terms of ability to establish rapport, ability to relay the importance of the study, time to complete study, financial cost, numbers of personnel involved, amount of travel, respondent accessibility and rate of response or return. The information summarized in Figure 2 is drawn from Backstrom and Hursh (1963), Oppenheim (1966), Warwick and Lininger (1975), and Wentling and Lawson (1975).

Figure 2

Summary and Ratings of Methods of Follow-Up Study

Method	Personal Interview	Telephone Interview	Mail Survey
Ability to establish rapport	High	Moderate	Low
Ability to relay the importance of the study	High	High to Moderate	Moderate to Low
Time to complete study	High	High to Moderate	Moderate to Low
Financial Cost	High	High to Moderate	Low
Numbers of personnel involved	High to Moderate	High to Moderate	Low
Amount of travel	High	Low	Low
Respondent accessibility	Moderate	High to Moderate	High
Rate of response or return	High	High to Moderate	Moderate to Low

Given the scope, purpose and available resources for this study, the mail survey was chosen as the most appropriate, effective, and efficient method, especially in terms of time, cost and personnel. It was felt that the explanatory letter would be able to relay the importance of the study and at least build a satisfactory level of rapport with the participants. The participants included all graduates from the program and where permission was granted, their supervisors. Ten graduating classes, with an average of six graduates from each class (n = 60), were investigated. A decision not to include dropouts was made, as the numbers were small, and dropout information was not considered within the scope and objectives of this study.

Evaluation Studies in Nursing Education

The greater portion of the theory of evaluation in nursing education deals specifically with nursing care. The evaluation process has been studied in the context of nursing activities, nurse-patient relationships and the outcomes of the educational process in reference to nursing care. Implicit in the studies which have contributed to this theory is the preparatory skills and knowledge; that is the education of the nurse during his/her nursing education program.

This review, in relation to nursing education, offers a summary of the nursing literature from 1963 to the present. Rather than attempt to plot the review in terms of nursing care studies, nursing education studies, model formulation studies, or in other fashion, the review is presented in chronological order. The findings are analyzed for strengths and utility in assisting with the development of the model and conceptual framework used in this study.

Hayter (1963, 1971) undertook two follow-up studies of baccalaureate nursing programs in order to ascertain how well the graduates were prepared for their jobs, the positions held, continuing education and professional activities, and future plans for work and education. A second focus of the study was to gather information which would assist in guiding curriculum change, if necessary. The approach used in this study was that of evaluation of outcomes as described by Bloch (1975), Donabedian (1969), and Meleis and Benner (1975). The questionnaire was based on the objectives of the program, and functions, standards and qualifications for practice as set out by the American Nurses Association. The model for the study corresponds to what Stufflebeam (1971) has labelled the decision-objective model.

Luker (1981) states that "The process of evaluating is highly complex and subjective. Inherently it involves a combination of basic assumptions underlying the activities being evaluated and of personal values on the part of those who are doing the evaluating...Evaluation always starts with a recognition of values and these values may be either explicit or implicit" (p. 89-90).

She asserts to the utility of using the nursing process (assessment, planning, intervention, and evaluation), a problem-solving approach to patient care, in providing a framework for the collection of data which can be used retrospectively for the purpose of evaluation research and studies. The nursing process corresponds to some degree to Stufflebeam's (1971) model for evaluation: assessment-context, planning-inputs, intervention-process, and evaluation-product. Although the nursing process is most often applied in reference to nursing care,

it aptly applies in reference to nursing education. The process is not intended to be evaluation research oriented, but it does have utility in developing and organizing a framework for evaluation. The evaluation stage of the nursing process, emphasizes Luker (1981), "is a way forward for evaluative research in nursing" (p. 92).

Luker (1981) reviews the work of Donabedian (1969), and Lindeman (1976) who corresponds to Donabedian in her approach to evaluation: structure-setting, process-care given and outcomes-patient outcome. Luker appears to favor a process-outcome approach to evaluation, akin to a modified Scriven (1967) judgement-strategy model, with both formative and summative elements.

Zettinig and Lang (1981) state that "Evaluation provides objective data upon which educators make decisions about course components, teaching strategies, and student achievement. Information obtained can reinforce desirable teaching-learning methods that support achievement of course objectives, as well as point out undesirable aspects of the course" (p. 24).

They applied the concepts of Donabedian (1969), structure-process-outcomes, in their evaluation of a course in leadership and management. They concluded that it is an effective model (approach) to use during the course of a program in order to assess needed changes, and at the conclusion of a program in order to effectively measure results. They recommend the development of more evaluation tools based on this approach.

Elliot (1982) surveyed registered nurses awaiting entry into a post-R. N. baccalaureate program and a group of graduates of the

program. Her purpose was to identify selected characteristics of each group and to compare performance of the groups along the dimensions of leadership, teaching, planning, communications, and professional development. She indicated that her follow-up approach was an effective method of obtaining information.

Elliot and Field (1983) conducted a follow-up study of graduates of a baccalaureate program in nursing. Their intent was to evaluate and compare performance of basic and post- R. N. baccalaureate prepared nurses. This study was based on recommendations from a previous study completed by Elliot (1982). The findings provided the evaluators with insights into the need for reassessing the learning needs and preparation of both groups of nurses. The study indicated the need to include an interview component in follow-up studies when the information collected is not self-explanatory, and findings suggest further probing is required.

Campbell and Field (1983) completed a follow-up of graduates from an advanced obstetrics course in order to assess their perceptions of course effectiveness in preparing them for nursing roles, and to determine their post-course employment profile in obstetrical nursing. They were satisfied with the outcome of the study and recommended that follow-ups be continued in order to provide information for course revision and improvements in keeping with changing needs of nurses.

Clark et al. (1983) applied the context, input, process, product model of Stufflebeam in evaluating the curriculum of a baccalaureate nursing program. They indicate that it was an effective model in providing the framework for the study, although it was time consuming to

implement. They suggest that this model requires a high level of commitment, of all involved, to the evaluation process, and that it would be more efficient if access to accurate records of demographic, academic and other background information was available from student records.

Faulk (1984) conducted an evaluation of a single continuing education program on assertiveness to assess its impact, to gather information for course improvement, and to document participants' interest in application of the information in their clinical practice. This evaluation, she indicates, was well worth the time and effort as it provided her with information which supported the program's worth, identified its strengths and weaknesses, and provided her with inputs for course revision and improvement.

Smillie, Wong and Arklie (1984) presented a framework for evaluation of support courses within a nursing program. Their main intent was to identify the course relevance and fit with the overall nursing curriculum. The framework consisted of elements from the works of Glaser (1962), Stake (1967) and Stufflebeam (1971). They emphasized four phases of the evaluation process--content, entry behavior, instructional procedures, and outcomes. Content addresses the issue of how the support course complements the overall program framework. Entry behavior assesses the pre-course knowledge and attitudes. Instructional procedures focuses on faculty-student and student-student transactions, and costs in time and money. Outcomes refers to analysis of testing procedures, student satisfaction and faculty satisfaction. They state that the completion of these four phases leads to decision-making. The

process of evaluation, using their framework, is an on-going process for evaluation and selection.

This review of evaluation studies in nursing education has been undertaken for the purpose of assisting with the development of the model and conceptual framework used in this study. In evaluation of nursing education the main focus appears to be on process and outcomes. Process evaluation addresses the question of what is being taught and how this is accomplished. Outcome evaluation indirectly asks "What are the benefits to the recipients of nursing care?". More directly stated, outcome evaluation asks "How well is the graduate of the nursing education program prepared to nurse?".

Summary

This chapter provided a review of evaluation theories and models, evaluation approaches, the utility of follow-up studies as a means to program evaluation, and a review of relevant nursing studies in education. The review has provided the following guidelines for the design, plan and implementation of this study.

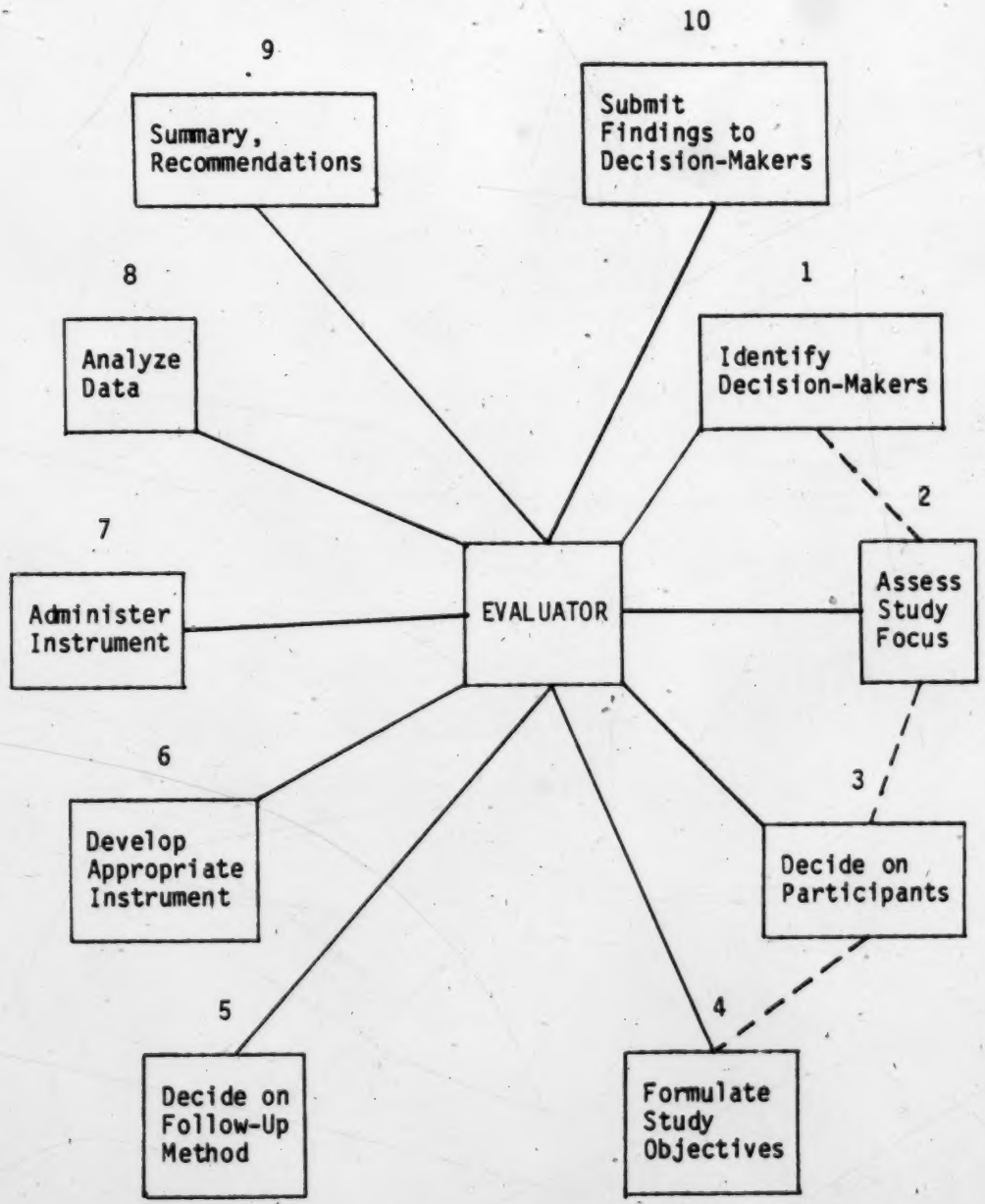
1. Identification of the decision-makers.
2. Assessment of program stage on which the evaluation will focus.
3. Decision as to the participants in the study.
4. Formulation of objectives for the study.
5. Decision as to follow-up method.
6. Development of an appropriate instrument for data collection--based on objectives and method of follow-up.
7. Administration of the instrument.

8. Analysis of collected data.
9. Summary and recommendations--based on data analysis.
10. Submission of findings to decision-makers.

Figure 3 graphically represents these guidelines. The decision-maker, as depicted by the dotted lines, plays an active role in the assessment of the study's focus, the participants in the study, and the formulation of objectives. The evaluator appears as the central figure in the evaluation process, and as depicted by the solid lines, is in a position to receive and act upon feedback throughout the various steps of the evaluation. This is in keeping with the recommendation of Wentling and Lawson (1975) that once the objectives are established, the primary responsibility for the evaluation should be assigned to one individual.

Figure 3

Guidelines for Design, Plan and Implementation of Follow-up Study



CHAPTER III

METHODOLOGY

This chapter contains a description of the subjects in the study, the development of the instruments used, the procedures for data collection, and the treatment of the data.

Subjects

The overall purpose of this study was to obtain information regarding the "Fundamentals in Operating Room Nursing Program" which would be used in guiding future program revisions and planning activities, and as a support for continuation of the program. Two separate groups of participants were included. All graduates of the "Fundamentals in Operating Room Nursing Program" were included such that an overall retrospective-subjective view and response could be achieved. In addition, with permission of the graduates, their first operating room supervisors following graduation from the program were included such that their responses to the graduates' preparation for Operating Room Nursing Practice could be assessed. It was anticipated that their responses would afford an objective view, and that the information obtained would assist with identifying program strengths and deficits in preparing nurses for operating room practice.

Instrumentation

An effective and efficient method by which to obtain follow-up information from a large group is through the mail questionnaire (Wentling and Lawson, 1975; Warwick and Lininger, 1975; and Oppenheim, 1966). This was the method chosen for this study as the subjects were

geographically dispersed, most questions required a forced-choice answer and time and cost constraints were at a minimum.

The variables chosen to be addressed, in this study, were the result of discussion and consultation with varied Nursing Management and Operating Room Nursing Education personnel at the University of Alberta Hospitals, and from the program outline, content, objectives, and expected outcomes.

Questionnaire Design - Graduates

The initial draft of the graduate questionnaire was distributed to my thesis advisor in the Department of Educational Administration; four instructors and the Assistant Director of Nursing in the Department of Nursing Education and Research at the University of Alberta Hospitals; to a Professor in the Faculty of Nursing, University of Alberta who has had extensive follow-up study experience; and to a former instructor of the "Fundamentals in Operating Room Nursing Program". Suggestions for revision of questions, wording, placement in the questionnaire, and utility of questions were used in order to improve the overall questionnaire design. A revised draft was then resubmitted to my advisor, to the Assistant Director of Nursing, to the Professor in the Nursing Faculty, and to the former instructor of the program. Agreement was obtained as to the suitability of the questionnaire design.

Pilot Study - Graduate Questionnaire

The revised questionnaire was pilot tested with ten nurses employed in the Operating Room at the University of Alberta Hospitals. These included six Unit Supervisors, one Inservice Instructor and three Staff Nurses. They were chosen because all have completed a six month Post

Graduate Course in Operating Room Technique and Management. Comments were requested on the ease with which the questions flowed, the clarity of questions, the number of questions, the possibility of adding or deleting questions, and the length of time required to complete the questionnaire. (See Appendix A, Pilot Cover Letter.)

Suggestions for changes in content, question rewording for clarification, and reordering of questions 81 - 82 were submitted. Changes were made based on the pilot study respondents' recommendations; no questions were added or deleted.

Questionnaire Design - Supervisors

The questionnaire for the supervisors was designed such that responses would indicate: (1) the relevance which these supervisors place on selected skills and qualities as required of "junior" operating room nurses, and (2) their perceptions of how well the graduates performed the skills, and displayed the qualities during their first three months of practice following graduation from the program.

The questionnaire was designed with input from a former post graduate operating room nursing program instructor, an inservice education instructor in the Operating Room, and an Assistant Director of Nursing - Operating Room. They were chosen because of their extensive experience in operating room education, practice and evaluation procedures. It was felt that their input throughout the questionnaire design, and their agreement as to the suitability of the final questionnaire gave credibility to its utility as an effective tool for this study. Therefore no pilot study was undertaken.

Data Collection

The data for this study was obtained from two sources--the graduates of the program and their first supervisors in an Operating Room following graduation.

Graduates

The finalized graduate questionnaire was distributed to all graduates of the program. This was done with the cooperation of the Alberta Association of Registered Nurses, Edmonton, Alberta. The staff at the Association, with approval of Council, updated graduate addresses, coded the questionnaires and completed the mailing. A follow-up mailing to nonrespondents was also completed through the Association. The mail-out included a cover letter, the questionnaire on green paper and a self-addressed and stamped envelope for return of the questionnaire. Confidentiality was expressed in the cover letter. The graduates were asked for permission to contact their first supervisors, following the Fundamentals in Operating Room Nursing Program, in order to assess their perceptions of how the program prepared them for employment. The final page of the questionnaire was used for this purpose. Consent was implicit in their completing the required information (page 14 of the questionnaire). Twenty graduates consented permission to contact their Supervisors.

The number of graduates who chose a particular supervisor ranged from one to six. One supervisor was chosen by six graduates, two by three, one by two, and six by one. Although 20 graduates consented permission, only 10 supervisors were identified for the study.

Supervisors

Ten supervisors were identified by the graduates. The supervisors questionnaire was mailed in the sixth week following the first deadline given the graduates for return of their questionnaires. It was decided that graduate responses, received after that time, would not be used for supervisor contact. The supervisor mail-out included a cover letter, the name(s) of the graduate(s) who submitted her name, the questionnaire on white paper, and a self-addressed and stamped envelope for return of the questionnaire. The supervisors were assured confidentiality and that their responses would be used only for the purpose of this study.

A brief outline of the graduate questionnaire content was sent to them for reference purposes. The results of the graduates responses were not shared with them as it was felt that this might influence the supervisors' responses. A two week deadline was given for return of the questionnaire. A follow-up reminder phone call was made to non-respondents in the fourth week following the initial mailing.

Data Collection Summary

Tables 1 and 2 summarize the distribution and return of the graduate and supervisor questionnaires. A 12 week time period elapsed from the first mailing to the graduates to the final return from the supervisors. Eighty percent of the graduates returned their questionnaires; of these 85% were useable. One hundred percent of the supervisors returned their questionnaires; of these 100% were useable.

Data Treatment

The data obtained from the graduate questionnaire was transferred to computer tape for processing. The data obtained from the supervisor

questionnaire was hand processed. Descriptive statistics were applied to the data. Statistical analysis of the data included:

1. Frequency and percentage distribution.
2. Mean ranking.
3. Content analysis of open ended comments.

Table 1

Distribution and Return of Graduate Questionnaire

Distributed Week 1	First Return Week 4	Follow-Up	Final Return Week 6	Useable
n = 60	n = 40 66%	n = 20 33%	n = 48 80%	n = 41 85%

Table 2

Distribution and Return of Supervisor Questionnaire

Distributed Week 6	First Return Week 10	Follow-Up	Final Return Week 12	Useable
n = 10	n = 7 70%	n = 3 30%	n = 10 100%	n = 10 100%

Summary

Data for this study was obtained from the graduates of the Fundamentals in Operating Room Nursing Program, and from the supervisors of these graduates. A questionnaire was developed for each group of participants. Each questionnaire was pilot tested and reviewed by experienced Operating Room Nursing personnel from practice, management

and education. The mail system was used for distribution and return of the questionnaires.

The data was subjected to descriptive statistical analysis which included frequency and percentage distribution, means, and content analysis of open ended responses.

CHAPTER IV

ANALYSIS AND FINDINGS

This chapter is a presentation of the data analysis and summary of the study findings. The findings are presented in terms of the 13 objectives of this study. The objectives were:

1. To obtain a demographic profile of the graduates.
2. To obtain an educational profile of the graduates.
3. To obtain a pre-program employment profile of the graduates.
4. To ascertain influencing factors which contributed to the graduates' taking the program.
5. To determine the graduates' response to the individual elements of the program.
6. To assess the relevance of the individual elements of the program's theoretical and clinical content, in meeting the graduates' learning needs.
7. To assess the graduates' perception of their transition from the program to the workplace.
8. To assess areas of the program for modification: revision, deletion and addition.
9. To assess areas of conflict, with other learners, for experience in the clinical setting.
10. To obtain a post graduate O. R. employment profile.
11. To determine the graduates' post program involvement in continuing education.

12. To determine the graduates' first Operating Room Supervisors' perceptions of the graduates' preparation for O. R. nursing (with graduates' permission).

13. To determine any unexpected outcomes from the program.

Two groups of respondents were involved in this study (1) graduates of the "Fundamentals in Operating Room Nursing Program" and (2) the supervisors of these graduates. Objectives one to 11 deal specifically with graduate responses. Objective 12 deals with supervisor responses. Objective 13 addresses the overall responses from both groups. Each objective is outlined along with the respective questions from the questionnaires used in this study.

Objective 1: To obtain a demographic profile of the graduates - Questions 1-5.

1. Your place of residence immediately prior to F. O. R. N. Program was:

2. Your place of residence at present is:

The majority of the graduates (87.8%) resided in Alberta prior to the F. O. R. N. program. This figure increased to 92.7% at present. Very little change occurred as to location, by district, following the program. Two graduates came to the program from British Columbia and one came from Saskatchewan. (See Table 3.)

Table 3

Frequency and Percentage Distribution of Place of Residence Prior to F. O. R. N. Program, and Place of Residence at Present

Category	Frequency	Percentage
1. Place of Residence Prior to F. O. R. N. Program		
Northern Alberta	3	7.3
North Central Alberta	19	46.3
Central Alberta	7	17.1
Southern Alberta	5	12.2
South Central Alberta	2	4.9
Other	3	7.3
No Response	2	4.9
2. Place of Residence at Present		
Northern Alberta	4	8.9
North Central Alberta	21	46.7
Central Alberta	8	17.8
Southern Alberta	1	2.2
South Central Alberta	4	8.9
Other	-	--
No Response	3	7.3

3. Your age in years at commencement of F. O. R. N. Program was:

Seventeen graduates (41.5%) were between 20 - 24 years; 12 (29.3%) were between 25 - 29 years. A total of 29 (70.8%) were less than 30 years of age; 36 (87.9%) were under 35 years of age. Only five (12.2%) were older than 35 years. None were older than 40 years. (See Table 4.)

4. Your marital status at commencement of F. O. R. N. Program was:

Twenty-two graduates (53.7%) were single; 13 (31.7%) were married; four (9.8%) were divorced; and two (4.9%) either responded with "Other" or did not respond to this item. (See Table 4.)

5. Number of children you had at commencement of F. O. R. N. Program was:

Thirty-three (80.5%) had no children; two (4.9%) had one or two children; and four (9.8%) had three children. (See Table 4.)

Objective 2: To obtain an educational profile of the graduates - Questions 6-13.

6. Your year of high school graduation was:

Three of the respondents (7.3%) graduated before 1965; 14 (34.2%) graduated between 1965 - 1974; and 24 (58.5%) graduated after 1975. (See Table 5.)

7. The number of months (class and clinical) from start to completion of your Registered Nurse Program was:

Table 4

Frequency and Percentage Distribution of Age, Marital Status and Number of Children at F. O. R. N. Program Commencement

	Frequency	Percentage
3. Age		
20 - 24 Years	17	41.5
25 - 29 Years	12	29.3
30 - 34 Years	7	17.1
35 - 39 Years	5	12.2
Over 40 Years	-	--
No Response	-	--
4. Marital Status		
Single	22	53.7
Married	13	31.7
Widowed	-	--
Divorced	4	9.8
Other	1	2.4
No Response	1	2.4

Table 4 (continued)

	Frequency	Percentage
5. Number of Children		
None	33	80.5
One	2	4.9
Two	2	4.9
Three	4	9.8
Four or More	-	--
No Response	-	--

Table 5

Frequency and Percentage Distribution of Year of High School Graduation

Category	Frequency	Percentage
6. Year of High School Graduation		
Before 1960	-	--
1960 - 1964	3	7.3
1965 - 1969	7	17.1
1970 - 1974	7	17.1
1975 - 1979	13	31.7
After 1980	11	26.8

Twenty-three of the respondents (56.1%) had less than 24 months in their basic R. N. program; 12 (29.3%) had between 25 and 34 months; five (12.2%) had between 35 and 44 months; and one (2.4%) had more than 45 months. (See Table 6.)

8. The type of institution in which you completed your Registered Nurse program was:

The majority completed their R. N. program in a hospital (19, 46.3%) or college (18, 44.0%); two (4.9%) completed programs in a University; and two (4.9%) responded with "Other". "Other" referred to technical institutions. (See Table 6.)

9. Year of graduation from your Registered Nurse program was:

Two respondents (4.9%) graduated between 1965 - 1969; three (7.3%) graduated between 1970 - 1974; nine (22.0%) graduated between 1975 - 1979; and 27 (65.9%) graduated after 1980. (See Table 6.)

10. Estimated number of days of operating room experience in your Registered Nurse program was:

The majority (23) of the respondents had less than 10 days O. R. experience in their R. N. program: five (12.2%) had none; 14 (34.1%) had less than five days; and four (9.8%) had six to 10 days. Seventeen had more than 10 days experience: seven (17.1%) had 11 to 20 days; six (14.6%) had 21 to 30 days; four (9.8%) had more than 30 days (two had six weeks, one had 49 days, one had three months); and one (2.4%) did not respond to this question. (See Table 7.)

11. Type of Operating room experience in your Registered Nurse program was:

Table 6

Frequency and Percentage Distribution of Months in R. N. Program, Institution in Which R. N. Program Completed and Year of Graduation From R. N. Program

Category	Frequency	Percentage	
7. Months in R. N. Program			
Less than 20 Months	1	2.4	
20 - 24 Months	22	53.7	56.1
25 - 29 Months	7	17.1	
30 - 34 Months	5	12.1	29.3
35 - 39 Months	4	9.8	
40 - 44 Months	1	2.4	12.2
More than 45 Months	1	2.4	
8. Institution in Which R. N. Program Completed			
Hospital	19	46.3	
College	18	44.0	
University	2	4.9	
Other	2	4.9	

Table 6 (continued)

Category	Frequency	Percentage
9. Year of Graduation From R. N. Program		
Before 1960	-	--
1960 - 1964	-	--
1965 - 1969	2	4.9
1970 - 1974	3	7.3
1975 - 1979	9	22.0
After 1980	27	65.9

Five respondents (12.2%) had no O. R. experience; 13 (32.0%) had observational experience; 18 (44.0%) had observational plus participation experience; three (7.3%) had a mostly participation experience; one (2.4%) responded with "Other" (acted as a member of the O. R. nursing team for three months summer relief); and one (2.4%) did not respond to this question. (See Table 7.)

12. Month and year of graduation from the F. O. R. N. Program was:

Table 8, upper section, summarizes the number of graduates from each class who responded to the questionnaire. The numbers of responses ranged from one to seven. Seven is the maximum graduates from any program.

Table 7

Frequency and Percentage Distribution of Days O. R. Experience in R. N. Program, and Type of O. R. Experience in R. N. Program

Category	Frequency	Percentage
10. Days O. R. Experience in R. N. Program		
None	5	12.2
Less than 5 Days	14	34.1
6 - 10 Days	4	9.8
11 - 20 Days	7	17.1
21 - 30 Days	6	14.6
More than 30 Days	4	9.8
No Response	1	2.4
11. Type of O. R. Experience in R. N. Program		
None	5	12.2
Observation Only	13	32.0
Observation/Participation	18	44.0
Mostly Participation	3	7.3
Other	1	2.4
No Response	1	2.4

13. Your average grade in F. O. R. N. Program was:

One respondent (2.4%) achieved between 70 - 74%; five (12.2%) achieved between 75 - 79%; nine (22.0%) achieved between 80 - 84%; 14 (34.1%) achieved between 85 - 89%; and eight (19.5%) achieved between 90 - 94%. The majority (75.6%) achieved between 80 - 94%. Four respondents (9.8%) did not respond to this question. (See Table 8.)

Objective 3: To obtain a pre-program employment profile of the graduates - Questions 14-18.

14. Number of years working in nursing (either part time or full time) prior to taking F. O. R. N. Program was:

The majority of the respondents (63.4%) had less than three years nursing experience: six (14.6%) had no experience, 10 (24.4%) had less than one year; and 10 (24.4%) had from one year to two years, eleven months. The remainder of the respondents had varied experience: six (14.6%) had three years to five years, eleven months; seven (17.1%) had six years to 10 years, eleven months; and two (4.9%) had more than 11 years nursing experience. (See Table 9.)

15. Number of years operating room experience prior to taking F. O. R. N. Program was:

Thirty-six of the respondents (87.8%) had no O. R. experience; four (9.8%) had less than one year; and one (2.4%) had one year to two years, eleven months (she had not worked in the O. R. for 10 years). (See Table 9.)

Table 8

Frequency and Percentage Distribution of Month and Year of Graduation From F. O. R. N. Program, and Average Grade in F. O. R. N. Program

Category	Frequency	Percentage
12. Month and Year of Graduation from F. O. R. N. Program		
July 1981	3	7.3
December 1982	1	2.4
April 1983	5	12.2
July 1983	5	12.2
December 1983	5	12.2
April 1984	2	4.9
August 1984	2	4.9
December 1984	7	17.1
April 1985	4	9.8
July 1985	5	12.2
No Response	2	4.9

Table 8 (continued)

Category	Frequency	Percentage
13. Average Grade in F. O. R. N. Program		
65 - 69%	-	--
70 - 74%	1	2.4
75 - 79%	5	12.1
80 - 84%	9	22.0
85 - 89%	14	34.1
90 - 94%	8	19.5
95 - 100%	-	--
No Response	4	9.8

Table 9

Frequency and Percentage Distribution of Years Nursing Experience Prior to F. O. R. N. Program, and Years O. R. Experience Prior to F. O. R. N. Program

Category	Frequency	Percentage
14. Years Nursing Experience Prior to F. O. R. N. Program		
None	6	14.6
Less than 1 Year	10	24.4
1 Year - 2 Years, 11 Months	10	24.4
3 Years - 5 Years, 11 months	6	14.6
6 Years - 10 Years, 11 Months	7	17.1
11 Years to 14 Years, 11 Months	2	4.9
More than 15 Years	-	--
15. Years O. R. Experience Prior to F. O. R. N. Program		
None	36	87.8
Less than 1 Years	4	9.8
1 Year - 2 Years, 11 Months	1	2.4
3 Years - 5 Years, 11 Months	-	--
6 Years - 10 Years, 11 Months	-	--
11 Years - 14 Years, 11 Months	-	--
More than 15 Years	-	--

16. Employment status immediately prior to taking F. O. R. N. Program was:

The majority of the respondents were employed in nursing: 19 (46.3%) were employed full time; 11 (27.0%) were employed part time. One (2.4%) was employed, but not in nursing; three (7.3%) were unemployed; and four (9.8%) were students. Three respondents (7.3%) answered "Other". Two worked relief, and one was a Workers Compensation Board (W. C. B.) recipient. (See Table 10.)

17. If employed in nursing, your area of employment immediately prior to taking F. O. R. N. Program was:

Ten respondents (24.4%) worked on a surgical ward; 10 (24.4%) worked on a medical ward; one (2.4%) worked on pediatrics; and one (2.4%) worked on obstetrics. Eleven respondents (26.8%) answered "Other" to this question. They worked as follows: one at the federal penitentiary, one in Post Anaesthetic Recovery Room, four on surgical float pools, one in occupational health, one on an orthopedics ward, one in a nursing home, one on a neurosurgical unit, and one in a medical float pool. Eight of the respondents (19.5%) did not respond to this question. (See Table 10.)

18. If employed in nursing, your position was:

Thirty-two (78.0%) of the respondents were employed as staff nurses prior to taking the F. O. R. N. Program. One (2.4%) was employed as a team leader in a nursing home. Eight of the respondents (19.5%) did not respond to this question. (See Table 10.)

Table 10

Frequency and Percentage Distribution of Employment Status Prior to F. O. R. N. Program, Area of Employment Prior to F, O. R. N. Program, and Employment Position in Nursing

Category	Frequency	Percentage
16. Employment Status Prior to F. O. R. N. Program		
Employed in Nursing Full Time	19	46.3
Employed in Nursing Part Time	11	27.0
Employed, but not in Nursing	1	2.4
Unemployed	3	7.3
Student	4	9.8
Other	3	7.3
17. Area of Employment Prior to F. O. R. N. Program		
Surgical Ward	10	24.4
Medical Ward	10	24.4
Pediatrics	1	2.4
Obstetrics	1	2.4
Emergency	-	--
Operating Room	-	--
Other	11	26.8
No Response	8	19.5

Table 10 (continued)

Category	Frequency	Percentage
18. Employment Position in Nursing		
Staff Nurse	32	78.0
Head Nurse, Unit Supervisor	-	--
Head Nurse on Shift	-	--
Area Supervisor	-	--
Instructor	-	--
Other	1	2.4
No Response	8	19.5

Objective 4: To ascertain influencing facators which contributed to the graduates' taking the program - Questions 19-23.

19. You first heard about F. O. R. N. Program through:

Varied responses were received as to how the respondents heard about the F. O. R. N. program: one (2.4%) from the Alberta Association of Registered Nurses; 11 (26.8%) from acquaintances; four (9.8%) from former students; six (14.6%) from instructors; three (7.3%) from advertising; 14 (34.1%) through personal inquiry; and one (2.4%) from unstated source. One respondent (2.4%) did not respond to this question. (See Table 11.)

20. Your main reason for taking F. O. R. N. Program was:

Table 11

Frequency and Percentage Distribution of How You Heard About F. O. R. N. Program, and Your Main Reason for Taking F. O. R. N. Program

Category	Frequency	Percentage
19. How You Heard About F. O. R. N. Program		
Alberta Association of Registered Nurses	1	2.4
Acquaintances	11	26.8
Former Student	4	9.8
Instructor	6	14.6
Advertising	3	7.3
Personal Inquiry	14	34.1
Other	1	2.4
No Response	1	2.4
20. Your Main Reason for Taking F. O. R. N. Program		
Requirement to Maintain Employment	-	--
Prerequisite for Employment	12	29.3
Promotion Opportunity	-	--
Desire for Change	26	63.4
Other	2	4.9
No Response	1	2.4

Twelve (29.3%) respondents stated that the program was a prerequisite for employment. The majority (63.4%) stated a desire for change. Two respondents (4.9%) chose "Other" as a response. One stated that due to injury she could not return to her other job, and one enrolled in the program in order to be in the O. R. over the summer as there were no jobs available till September of that year. One respondent (2.4%) did not respond to this question. (See Table 11.)

21. The program was financed by:

Thirty-three (80.5%) of the respondents financed themselves during the program. Two (4.9%) acquired student loans; one (2.4%) was self-financed with assistance from employing agency; and three (7.3%) were self-financed with some student loan assistance. Two respondents (4.9%) chose the "Other" category. One of these stated that her husband paid, and the other received a W. C. B. allowance. (See Table 12.)

22. Average number of shifts worked per week (to earn money) while taking F. O. R. N. Program was:

The majority of the respondents (80.5%) did not work any shifts while taking the program. Four respondents (9.8%) worked one shift; one (2.4%) worked two shifts; and one (2.4%) worked four shifts. Two respondents (4.9%) chose not to respond to this question. (See Table 12.)

23. Employment upon completion of F. O. R. N. Program was:

Nineteen respondents (46.3%) were guaranteed full time employment in O. R.; two (4.9%) were guaranteed part time employment in O. R. (one casual, one ward duty with call back to O. R. as necessary); six (24.6%) were not guaranteed employment in O. R.; 11 (26.8%) were not guaranteed

Table 12

Frequency and Percentage Distribution of Program Financing, Shifts Worked per Week While Taking F. O. R. N. Program, and Employment Upon Program Completion

Category	Frequency	Percentage
21. Program Financing		
Self	33	80.5
Employing Agency	-	--
Student Load	2	4.9
Self/Employing Agency	1	2.4
Self/Student Loan	3	7.3
Employing Agency/Student Loan	-	--
Other	2	4.9
22. Shifts Worked Per Week to Earn Money While Taking F. O. R. N. Program		
None	33	80.5
1 Shift	4	9.8
2 Shifts	1	2.4
3 Shifts	-	--
4 Shifts	1	2.4
5 Shifts	-	--
No Response	2	4.9

Table 12 (continued)

Category	Frequency	Percentage
23. Employment Upon Program Completion		
Guaranteed Full Time Employment in O. R.	19	46.3
Guaranteed Part Time Employment in O. R.	2	4.9
Not Guaranteed Employment in O. R.	6	14.6
Not Guaranteed Employment	11	26.8
Other	2	4.9
No Response	1	2.4

employment; two respondents (4.9%) responded to the "Other" category. One stated she was guaranteed employment in her previous position on a surgical ward, and one stated she was going back to her previous job on an orthopedic ward. One respondent (2.4%) did not respond to this question. (See Table 12.)

Objective 5: To determine the graduates' response to the individual elements of the program.

Objective 6: To assess the relevance of the individual elements of the programs' theoretical and clinical content, in meeting the graduates learning needs.

Objective 7: To assess the graduates' perception of their transition from the program to the workplace.

Questions 24 - 72 have been designed to obtain response from the graduates, on the relevance of each of the individual elements of the "Fundamentals in Operating Room Nursing Program", in meeting their learning needs. The elements are organized into nine main headings which address:

Heading	Items
Program Structure	24 - 33
Introduction to Program	34 - 42
Clinical Experience	43 - 48
Student Support	49 - 55
Theoretical Evaluation	56 - 60
Perioperative Nursing Visits	61 - 62
Clinical Performance Evaluation	63 - 68
Peer Sharing	69 - 70
Preparation for Practice	71 - 72

The graduates' questionnaire allowed for one out of five possible responses to each item within these main headings. These responses, along with a brief description of each, are outlines below:

Unrelated/Unnecessary	1	Did not meet any learning needs
Irrelevant	2	Met very few learning needs
Relevant	3	Met some learning needs
Very Relevant	4	Met most learning needs
Extremely Relevant	5	Met all learning needs

They ranged from one (1) unrelated/unnecessary to five (5) extremely relevant.

Tables 13 through 21, inclusive, summarize the data obtained on the elements of the F. O. R. N. Program. Frequency distribution (F), percentage distribution (%), means (x), and rank (R) are presented in terms of each of the individual elements within a main heading. The total percentage and mean percentage are given in terms of each of the five possible responses within each main heading. The "No Response" column is used to indicate the frequency and percentage of elements which were left blank on the questionnaires.

The statement to which the respondents responded in questions 24 - 72 was: As well as you can recall, please indicate the relevance of each of the following items in meeting your learning needs, while taking the F. O. R. N. Program.

Program Structure

The majority of the responses (95.7%) indicated that the structure of the program rated 3 or higher: 3 (27.5%), 4 (52.4%) and 5 (15.8%). The individual elements ranged from a mean of 3.19 to 4.04. There were 2 (4.9%) No Responses in this heading. (See Table 13.)

Introduction to Program

The majority of the responses (96.4%) to this heading were rated 3 or higher: 3 (32.5%), 4 (38.2%) and 5 (25.5%). The mean range of the individual elements was 3.41 to 4.41. (See Table 14.)

Clinical Experience

A rating of 3 or higher was obtained in 94.8% of the responses: 3 (26.5%), 4 (44.7%) and 5 (23.6%). The range of the individual means was 3.53 to 4.12. (See Table 15.)

Student Support

A 90.2% response was obtained at a rating of 3 or higher: 3 (26.5%), 4 (39.0%) and 5 (24.7%). The means ranged from 3.02 to 4.63. One No Response was received. (See Table 16.)

Theoretical Evaluation

The majority of responses (92.1%) were rated 3 or higher: 3 (19.0%), 4 (52.7%) and 5 (20.4%). The mean range was 3.50 to 4.14. Two (4.9%) No Responses were received. (See Table 17.)

Perioperative Nursing Visits

A total of the respondents (83.1%) rated this experience as 3 or higher: 3 (40.3%), 4 (33.0%) and 5 (9.8%). A rating of 2 was received from 12.2% of the respondents. A range of 3.20 to 3.51 was obtained for individual means. Two (4.9%) No Responses were received. (See Table 18.)

Clinical Performance Evaluation

The majority of responses (93.5%) were rated 3 or higher: 3 (36.2%), 4 (44.7%) and 5 (12.6%). The mean range was 3.29 to 4.02. Three respondents provided a rating of 2 or less: 2 (5.7%), 1 (0.8%). (See Table 19.)

Peer Sharing

The majority of responses (96.5%) were rated 3 or higher: 3 (26.9%), 4 (46.4%) and 5 (23.2%). The mean range was 3.65 to 4.12. (See Table 20.)

Table 13

Frequency and Percentage Distribution of the Relevance of Program Items: Program Structure

Item	Category 1 (Unrelated/Unnecessary)		2 (Irrelevant)		3 (Relevant)		4 (Very Relevant)		5 (Extremely Relevant)		No Response		$\bar{x}$	R
	F	%	F	%	F	%	F	%	F	%	F	%		
24. Preprogram information	1	2.4	4	9.8	23	56.1	12	29.3	1	2.4	-	--	3.19	10
25. Program design	1	2.4	1	2.4	10	24.4	27	65.9	2	4.9	-	--	3.68	8
26. Clarity of program goals	-	--	1	2.4	8	19.5	25	61.0	7	17.1	-	--	3.92	5
27. Adequacy of program content	-	--	-	--	5	12.2	32	78.0	4	9.8	-	--	3.97	2
28. Length of program	-	--	1	2.4	13	31.7	21	51.2	6	14.6	-	--	3.78	7
29. Amount of theory	-	--	1	2.4	6	14.6	24	58.5	10	24.4	-	--	4.04	1
30. Length of clinical experience	-	--	-	--	12	29.3	19	46.3	10	24.4	-	--	3.95	4
31. Program handouts	-	--	-	--	12	29.3	20	48.8	9	22.0	-	--	3.92	6
32. Program text	-	--	4	9.8	16	39.0	14	34.1	7	17.1	-	--	3.58	9

Table 13 (continued)

Item	Category 1 Unrelated/ Unnecessary F	1 Unrelated/ Unnecessary %	2 Irrelevant F	2 Irrelevant %	3 Relevant F	3 Relevant %	4 Very Relevant F	4 Very Relevant %	5 Extremely Relevant F	5 Extremely Relevant %	No Response F	No Response %	$\bar{x}$	R
33. Work sheet study guides	-	--	1	2.4	8	19.5	21	51.2	9	22.0	2	4.9	3.97	3
Total Percentage		4.8		31.6		275.6		524.3		158.7		4.9		
Mean Percentage		0.5		3.1		27.5		52.4		15.8		0.5		
Median Percentage		0.0		2.4		26.9		51.2		17.1		0.0		

Table 14

Frequency and Percentage Distribution of the Relevance of Program Items: Introduction to Program

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{X}$	R
34. Theoretical introduction to operating room nursing	-	--	1	2.4	13	31.7	19	46.3	8	19.5	-	--	3.82	5
35. Introduction to aseptic technique	-	--	-	--	2	4.9	20	48.8	19	46.3	-	--	4.41	1
36. Sterilization content	-	--	1	2.4	13	31.7	15	36.6	12	29.3	-	--	3.92	4
37. Nursing care of the anaesthetized patient	-	--	1	2.4	5	12.2	21	51.2	14	34.1	-	--	4.17	2
38. Wound management content	-	--	2	4.9	17	41.5	16	39.0	6	14.6	-	--	3.63	7
39. Equipment orientation	-	--	1	2.4	22	53.7	10	24.4	8	19.5	-	--	3.61	8
40. Operating room suite orientation	-	--	1	2.4	13	31.7	14	34.1	13	31.7	-	--	3.95	3

Table 14 (continued)

Item	Category 1 (Unrelated/ Unnecessary) F	1 %	2 (Irrelevant) F	2 %	3 (Relevant) F	3 %	4 (Very Relevant) F	4 %	5 (Extremely Relevant) F	5 %	No Response F	No Response %	$\bar{x}$	R
41. Legal issues of operating room nursing	-	--	3	7.3	14	34.1	13	31.7	11	26.8	-	--	3.78	6
42. Personnel introductions	1	2.4	2	4.9	21	51.2	13	31.7	4	9.8	-	--	3.41	9
Total Percentage	2.4		29.1		292.7		343.8		231.6		0.0			
Mean Percentage	0.3		3.2		32.5		38.2		25.7		0.0			
Median Percentage	0.0		2.4		31.7		36.6		26.8		0.0			

Table 15

Frequency and Percentage Distribution of the Relevance of Program Items: Clinical Experience

Item	Category 1 Unrelated/ Unnecessary		2 Irrelevant		3 Relevant		4 Very Relevant		5 Extremely Relevant		No Response		$\bar{x}$	R
	F	%	F	%	F	%	F	%	F	%	F	%		
43. Clinical experience - general surgery	-	--	1	2.4	9	22.0	20	48.8	11	26.8	-	--	4.00	3
44. Clinical experience - gynaecology	-	--	-	--	9	22.0	20	48.4	12	29.3	-	--	4.07	2
45. Clinical experience - orthopaedics	-	--	6	14.6	13	31.7	15	36.6	7	17.1	-	--	3.56	5
46. Clinical experience - selected experiences	-	--	2	4.9	20	48.8	14	34.1	5	12.2	-	--	3.53	6
47. Scrub role experiences	-	--	1	2.4	5	12.2	23	56.1	12	29.3	-	--	4.12	1
48. Circulating role experiences	-	--	3	7.3	9	22.0	18	43.9	11	21.6	-	--	3.90	4

Table 15 (continued)

Item	Category 1 Unrelated/ Unnecessary F	%	2 Irrelevant F	%	3 Relevant F	%	4 Very Relevant F	%	5 Extremely Relevant F	%	No Response F	%	$\bar{x}$	R
Total Percentage	0.0		31.6		158.7		268.3		141.5		0.0			
Mean Percentage	0.0		5.3		26.5		44.7		23.6		0.0			
Median Percentage	0.0		3.7		22.0		46.4		26.8		0.0			

Table 16

Frequency and Percentage Distribution of the Relevance of Program Items: Student Support

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{x}$	R
49. Instructor-student support	-	--	-	--	4	9.8	14	34.1	23	56.1	-	--	4.63	1
50. Nursing staff-student support	-	--	5	12.2	15	36.6	18	43.9	3	7.3	-	--	3.46	5
51. Medical staff-student support	-	--	8	19.5	22	53.7	9	22.0	2	4.9	-	--	3.12	6
52. O. R. administration-student support	-	--	13	31.7	13	31.7	14	34.1	-	--	1	2.4	3.02	7
53. Student-student support	-	--	1	2.4	3	7.3	17	41.5	20	48.8	-	--	4.36	2
54. Individual student guidance	-	--	-	--	11	26.8	17	41.5	13	31.7	-	--	4.04	3

Table 16 (continued)

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{x}$	R
55. Individual goal pursuit opportunities	-	--	-	--	8	19.5	23	56.1	10	24.4	-	--	4.04	4
Total Percentage		0.0		65.8		184.4		273.2		173.2		2.4		
Mean Percentage		0.0		9.4		26.5		39.0		24.7		0.3		
Median Percentage		0.0		2.4		26.8		41.5		24.4		0.0		

Table 17

Frequency and Percentage Distribution of the Relevance of Program Items: Theoretical Evaluation

Item	Category 1 Unrelated/ Unnecessary		2 Irrelevant		3 Relevant		4 Very Relevant		5 Extremely Relevant		No Response		$\bar{x}$	R
	F	%	F	%	F	%	F	%	F	%	F	%		
56. Numbers of exams	-	--	1	2.4	5	12.2	24	58.5	11	26.8	-	--	4.09	2
57. Quality of exams as test of knowledge	-	--	2	4.9	5	12.2	21	51.2	13	31.7	-	--	4.09	3
58. Timing of exams with theory	-	--	-	--	7	17.1	21	51.2	13	31.7	-	--	4.14	1
59. Individual student presentations	-	--	6	14.6	10	24.4	22	53.7	2	4.9	1	2.4	3.50	4
60. Quality of student presentations	1	2.4	4	9.8	12	29.3	20	48.8	3	7.3	1	2.4	3.50	5

Table 17 (continued)

Item	Category 1 Unrelated/ Unnecessary F	%	2 Irrelevant F	%	3 Relevant F	%	4 Very Relevant F	%	5 Extremely Relevant F	%	No Response F	%	$\bar{x}$	R
Total Percentage	2.4		31.7		95.2		263.4		102.4		4.8			
Mean Percentage	0.5		6.3		19.0		52.7		20.4		1.0			
Median Percentage	0.0		4.9		17.1		51.2		26.8		0.0			

Table 18

Frequency and Percentage Distribution of the Relevance of Program Items: Perioperative Nursing Visits

Item	Category 1 (Unrelated/ Unnecessary)		2 (Irrelevant)		3 (Relevant)		4 (Very Relevant)		5 (Extremely Relevant)		No Response		$\bar{x}$	R
	F	%	F	%	F	%	F	%	F	%	F	%		
61. Experience with preoperative visits	-	--	4	9.8	16	39.0	17	41.5	4	9.8	-	--	3.51	1
62. Experience with postoperative visits	2	4.9	6	14.6	17	41.5	10	24.4	4	9.8	2	4.9	3.20	2
Total Percentage		4.9		24.4		80.5		65.9		19.6		4.9		
Mean Percentage		2.5		12.2		40.3		33.0		9.8		2.5		
Median Percentage		2.5		12.2		40.3		33.0		9.8		2.5		

Table 19

Frequency and Percentage Distribution of the Relevance of Program Items:
Clinical Performance Evaluation

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{x}$	R
63. Student self-evaluations	1	2.4	2	4.9	18	43.9	17	41.5	3	7.3	-	--	3.46	5
64. Unit Supervisor evaluations of students	1	2.4	7	17.1	14	34.1	17	41.5	2	4.9	-	--	3.29	6
65. Instructor evaluations of students	-	--	-	--	9	22.0	22	53.7	10	24.4	-	--	4.02	1
66. Nursing staff-student feedback	-	--	3	7.3	18	43.9	16	39.0	4	9.8	-	--	3.51	4
67. Opportunity to evaluate program	-	--	-	--	17	41.5	18	43.9	6	14.6	-	--	3.73	2
68. Opportunity to evaluate instructor	-	--	2	4.9	13	31.7	20	48.8	6	14.6	-	--	3.73	3

Table 19 (continued)

Item	Category 1 Unrelated/ Unnecessary F	%	2 Irrelevant F	%	3 Relevant F	%	4 Very Relevant F	%	5 Extremely Relevant F	%	No Response F	%	$\bar{x}$	R
Total Percentage	4.8		34.2		217.1		268.4		75.6		0.0			
Mean Percentage	0.8		5.7		36.2		44.7		12.6		0.0			
Median Percentage	0.0		4.9		32.9		42.7		17.1		0.0			

Table 20

Frequency and Percentage Distribution of the Relevance of Program Items: Peer Sharing

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{x}$	R
69. Opportunity to work with peers	-	--	3	7.3	13	31.7	20	48.8	5	12.2	-	--	3.65	2
70. Sharing of concerns with peers	-	--	-	--	9	22.0	18	43.9	14	34.1	-	--	4.12	1
Total Percentage	0.0		7.3		53.7		92.7		46.3		0.0			
Mean Percentage	0.0		3.7		26.9		46.4		23.2		0.0			
Median Percentage	0.0		3.7		26.9		46.4		23.2		0.0			

Table 21

Frequency and Percentage Distribution of the Relevance of Program Items: Preparation for Practice

Item	Category 1 Unrelated/ Unnecessary F	1 %	2 Irrelevant F	2 %	3 Relevant F	3 %	4 Very Relevant F	4 %	5 Extremely Relevant F	5 %	No Response F	No Response %	$\bar{x}$	R
71. Preparation for operating room nursing employment	-	--	2	4.9	10	24.4	15	36.6	14	34.1	-	--	4.00	1
72. Level of competency development	-	--	1	2.4	14	34.1	21	51.2	5	12.2	-	--	3.73	2
Total Percentage	0.0		7.3		58.5		87.8		46.3		0.0			
Mean Percentage	0.0		3.7		29.3		43.9		23.2		0.0			
Median Percentage	0.0		3.7		29.3		43.9		23.2		0.0			

Preparation for Practice

The majority of respondents (96.4%) rated this item 3 or higher: 3 (29.3%), 4 (43.9%) and 5 (23.2%). The mean range was 3.73 to 4.00. (See Table 21.)

Objective 8: To assess areas of the program for modification: revision, deletion and addition - Questions 73-78.

Delete Theoretical Content

The majority of the respondents (85.4%) indicated that they would not delete any theoretical content. The remainder (14.6%) suggested deletions to content:

1. less intensive sterilization classes (6)
2. less emphasis on student presentations (1).

(See Table 22.)

Delete Clinical Experience

The majority of the respondents (90.2%) would not delete any clinical experience. Four respondents (9.8%) suggested deleting some experiences:

1. orthopedic surgery (2)
2. self-directed selected experiences of the last week of the program (1).

(See Table 22.)

Revise Theoretical Content

Twenty-eight (68.3%) of the respondents indicated they would make no revisions in the programs' theory. Eleven (26.8%) suggested they would have benefited from:

1. increased skills lab time (2)
2. more theory on instruments and equipment (2)
3. more content on the psychological aspect of patient care in the operating room (1)
4. more emphasis on anatomy and physiology (1)
5. spreading theory over more classes; are too jam packed to absorb (2).

Several suggestions were made for changing the section of the program on sterilization content. These ranged from removing it, to lectures only, to a more concise presentation. Two respondents (4.9%) chose not to answer this question. (See Table 22.)

Revise Clinical Experience

The respondents were very closely divided in their opinion on the need to revise clinical experience: Yes (46.4%), and No (51.2%). Suggestions for revision were as follows:

1. omit orthopedics rotation (2)
2. increase orthopedics rotation (1)
3. more specialty areas (1)
4. increase time in general surgery rotation (4)
5. increase clinical time (1)
6. extend program by one month (1)
7. more opportunities to scrub with instructor (1)

8. less emphasis on specialty areas (1)

9. preceptors would help (3).

One respondent stated that she spent two days in a self-selected experience, but did not really gain too much. Another responded that she realizes now that she probably should have requested more individual help. One respondent chose not to answer this question. (See Table 22.)

Add Theoretical Content

Thirty-one respondents (75.6%) indicated they would not add any theoretical content. Nine (22.0%) indicated that some additions were necessary. The suggested additions were:

1. more content on legal aspects of O. R. nursing (1)

2. more information on nonroutine procedures and techniques, and a session during which they can be practiced (1)

3. theory on emergency nursing care (1)

4. class on shift management and time management (1)

5. more anatomy classes instead of self-directed learning (1).

Additional comments were:

1. cannot really remember

2. I found the sterilization material irrelevant while I was taking the program, but very relevant when I began working as an O. R. nurse and had to process my own supplies.

One respondent (2.4%) chose not to answer this question. (See Table 22.)

Add Clinical Content

Twenty-one respondents (51.2%) indicated they would not add any clinical experience. One stated it would be impossible without deleting theory or lengthening the program, but an extra day of practice would have made her first few days in the clinical setting more comfortable.

Sixteen respondents (39.0%) indicated they would have benefitted from:

1. a rotation in the ear, nose and throat service (3)
2. a rotation in plastic surgery (3)
3. a rotation in the urology service (2)
4. more scrub and circulating experience (1)
5. time spent in thoracic, cardiovascular and eye surgery (1)
6. a rotation in neurosurgery (1)
7. a day in the Central Supply Room (C. S. R.) as small hospitals have to do O. R. and C. S. R. (1)
8. a longer rotation in general surgery (1)
9. less time in orthopedics (1).

Four respondents (9.8%) chose not to answer this question. (See Table 22.)

Objective 9: To assess areas of conflict, with other learners, for experience in the clinical setting - Question 79.

The majority of the respondents (65.9%) indicated that there was no conflict, with other learners, for experience in the clinical setting. The following comments were received:

Table 22

Frequency and Percentage Distribution of Program Areas for Revision, Deletion and Addition

Item	Category					
	Yes		No		No Response	
	F	%	F	%	F	%
Would you:						
73. Delete any theoretical content?	6	14.6	35	85.4	--	--
74. Delete any clinical experience?	4	9.8	37	90.2	--	--
75. Revise any theoretical content?	11	26.8	28	68.3	2	4.9
76. Revise any clinical experiences?	19	46.4	21	51.2	1	2.4
77. Add any theoretical content?	9	22.0	31	75.6	1	2.4
78. Add any clinical experience?	16	39.0	21	51.2	4	9.8

1. There should not be any conflicts, ample educational opportunities should be available to post graduate students (3)

2. Usually had first choice of scrubs (2)

3. We were treated with first priority (1)

4. Not really - worked out pretty well (1)

5. Not in my program, as it was in the summer with no other student nurses present (1).

Fourteen (34.1%) respondents indicated they had some conflict with other learners. The identified conflict were as follows:

1. Students from school of nursing versus fundamental students; difficult to get good scrubs (4)

2. Previous fundamental program graduates

3. I do not feel that the fundamental students get the quality of help from staff nurses that they would get if other student nurses were not there

4. With such a limited time extra clinical experience in an area was hard to obtain; only two people allowed per clinical area

5. Sometimes staff was given opportunities to do major cases, rather than fundamental students

6. Everyone wanted to be in general surgery

7. Not a big problem, but definitely present. (See Table 23.)

Table 23

Frequency and Percentage Distribution of Conflict With Other Learners for Clinical Experience

Item	Category					
	Yes		No		No Response	
	F	%	F	%	F	%
Would you:						
79. Say there was conflict with other learners for clinical experience?	14	34.1	27	65.9	--	--

Objective 10: To obtain a post graduate O. R. employment profile - Questions 80-86.

Post F. O. R. N. Program Employment

Thirty-two (78.0%) of the respondents indicated that they have worked in an Operating Room since completing the F. O. R. N. Program; nine (22.0%) have not worked in an Operating Room. An employment profile of these nine graduates in not within the scope of this study. (See Table 24).

The remainder of this section deals specifically with the employment of those 32 graduates who have worked in an Operating Room since completing the F. O. R. N. Program. The areas addressed are hospital size and location, nursing positions held, length of

Table 24

Frequency and Percentage Distribution of Post F. O. R. N. Program O. R. Employment

Item	Category					
	Yes		No		No Response	
	F	%	F	%	F	%
80. Since completion of the F. O. R. N. Program, have you worked in an Operating Room?	32	78.0	9	22.0	-	--

employment, educational premium received, number of O. R. theatres in the hospitals, types of surgery performed, method of assignment, length of time in each assignment, number of patients worked with per week, and the number of preoperative and postoperative visits performed per week.

The graduates were asked to reply to questions 81-86 in terms of their first, second and third Operating Room Nursing employment positions. The majority of responses (90.6%) indicated that the graduates maintained their initial O. R. position; three (9.4%) changed employment once. None took on a third position. The analysis of the responses deals only with the graduates' first O. R. position. A description of the second positions, when applicable, is presented in the respective tables.

81. Please indicate the size and location of hospital(s) in which you have worked, since completion of F. O. R. N.

Program.

Size of Hospital

Four (12.5%) of respondents worked in hospitals having under 50 beds; two (6.2%) in hospitals of 51 - 100 beds; five (15.6%) in hospitals of 101 - 300 beds; four (12.5%) in hospitals of 301 - 500 beds; and 17 (53.1%) in hospitals of more than 500 beds. (See Table 25.)

Location of Hospital

Five (15.6%) of the hospitals were located in Northern Alberta; the majority (56.2%) were in North-Central Alberta; four (12.5%) were in Central Alberta; three (9.4%) were in Southern Alberta; none were located in South-Central Alberta; and two (6.2%) respondents did not reply. (See Table 25.)

82. Please indicate O. R. nursing positions held, length of employment, and highest amount of educational premium received per hour, in each position, since completion of F. O. R. N. Program.

Nursing Positions Held

The majority of the respondents (90.6%) indicated they were employed as a staff nurse; one (3.1%) as a head nurse; one (3.1%) as an area supervisor; and one (3.1%) in another capacity. (See Table 26.)

Length of Employment

Seventeen (53.1%) respondents have worked for 1 - 12 months; ten(31.2%) for 13 - 24 months; one (3.1%) for 25 - 36 months; three (9.4%) for 37 - 48 months; and one (3.1%) chose not to reply. (See Table 26.)

Table 25

Frequency and Percentage Distribution of Size and Location of Hospital(s)

Category	First Position		Second Position	
	F	%	F	%
81. Size of Hospital				
Under 50 Beds	4	12.5	-	--
51 - 100 Beds	2	6.2	-	--
101 - 300 Beds	5	15.6	-	--
301 - 500 Beds	4	12.5	1	3.1
More Than 500 Beds	17	53.1	2	6.2
No Response	-	--	29	90.6
Location of Hospital				
Northern Alberta	5	15.6	-	--
North-Central Alberta	18	56.2	2	6.2
Central Alberta	4	12.5	1	3.1
Southern Alberta	3	9.4	-	--
Southern-Central Alberta	-	--	-	--
Other	-	--	-	--
No Response	2	6.2	29	90.6

Educational Premium per Hour

Six (18.7%) received no educational premium; 17 (53.1%) received $0.01 - $0.20; one (3.1%) received $0.21 - $0.40; three (9.4%) received $0.41 - $0.60; and one (3.1%) received more than $0.60. Four (12.5%) chose not to reply. (See Table 26.)

83. Please indicate the number of operating room theatres in the hospitals in which you have worked since completion of the F. O. R. N. Program.

Number of O. R. Theatres

Eight (25.0%) of the respondents indicated the number of operating room theatres in their hospital was two or less; two (6.2%) indicated 3 - 4; five (15.6%) indicated 5 - 7; none indicated 8 - 10; and 17 (53.1%) indicated more than 10. (See Table 27.)

84. Please indicate the types of surgery routinely performed in the above hospitals.

Types of Surgery Performed

The most frequency cited responses were general surgery (93.7%), gynaecology (93.7%) and E. N. T. (93.7%). A full description of all types of surgery performed in the hospitals is given in Table 28.

Table 26

Frequency and Percentage Distribution of O. R. Nursing Positions, Length of Employment, and Educational Premium Received per Hour

Category	First Position		Second Position	
	F	%	F	%
82. O. R. Nursing Positions Held				
Staff Nurse	29	90.6	3	9.4
Head Nurse, Unit Supervisor	1	3.1	-	--
Head Nurse, Shift	-	--	-	--
Area Supervisor	1	3.1	-	--
Instructor	-	--	-	--
Other	1	3.1	-	--
No Response	-	--	29	90.6

Table 26 (continued)

Category	First Position		Second Position	
	F	%	F	%
Length of Employment				
1 - 12 months	17	53.1	2	6.2
13 - 24 Months	10	31.2	1	3.1
25 - 36 Months	1	3.1	-	--
37 - 48 Months	3	9.4	-	--
49 - 60 Months	-	--	-	--
No Response	1	3.1	29	90.6
Educational Premium per Hour				
None	6	18.7	1	3.1
.01 - .20 Dollars	17	53.1	1	3.1
.21 - .40 Dollars	1	3.1	-	--
.41 - .60 Dollars	3	9.4	-	--
More than .60 Dollars	1	3.1	-	--
No Response	4	12.5	30	93.7

Table 27

Frequency and Percentage Distribution of Number of O. R. Theatres in Hospital(s)

Category	First Position		Second Position	
	F	%	F	%
83. Number of O. R. Theatres				
2 or Less	8	25.0	-	--
3 - 4	2	6.2	-	--
5 - 7	5	15.6	2	6.2
8 - 10	-	--	-	--
More than 10	17	53.1	1	3.1
No Response	-	--	29	90.6

Table 28

Frequency and Percentage Distribution of Types of Surgery Performed

Category	First Position		Second Position	
	F	%	F	%
84. Types of Surgery Performed				
E. N. T.	30	93.7	3	100.0
General Surgery	30	93.7	3	100.0
Gynaecology	30	93.7	3	100.0
Neurosurgery	21	65.6	2	66.6
Ophthalmology	23	71.9	3	100.0
Orthopaedics	28	87.5	3	100.0
Plastic Surgery	27	84.4	3	100.0
Urology	25	78.1	3	100.0
Vascular	22	68.7	2	66.6
Thoracic	23	71.9	3	100.4
Cardiovascular	20	62.5	-	--
Other	3	9.4	-	--

85. Please select your most frequent method of assignment, and indicate the average length of time, in months, for each position in which you have been employed since completion of the F. O. R. N. Program.

The majority of respondents (68.7%) indicated they rotated to each service; two (6.2%) rotated to each service plus recovery room; five (15.6%) were assigned to a specific service; and one (3.1%) worked permanent shift full time. (See Table 29.)

Length of Assignment in Months

The majority of respondents indicated that their rotations were from one to two months in each service. Those respondents who were assigned to a specific service had been in that assignment for varied times: one for two months, one for 20 months, two for 24 months, and one for 42 months. Two respondents indicated they worked permanent shift full time: one for eight months and one for 36 months. Three respondents (9.4%) indicated second positions. One indicated her rotation was once a month; one rotated every two months; and one worked permanent shift part time.

86. Please indicate the average number of patients you personally work with, per week, and the average number of preoperative and post operative visits you perform per week.

Patients Worked with Per Week

Three (9.4%) respondents indicated they worked with 1 - 4 patients per week; four (12.5%) indicated 5 - 9; nine (28.1%) indicated 10 - 14; six (18.7%) indicated 15 - 19; four (12.5%) indicated 20 - 24; and six (18.7%) indicated more than 24 patients. (See Table 30.)

Table 29

Frequency and Percentage Distribution of Method of Assignment

Category	First Position		Second Position	
	F	%	F	%
85. Method of Assignment				
Rotation to Each Service	22	68.7	2	6.2
Rotation to Each Service Plus Recovery Room	2	6.2	-	--
Assigned to Specific Service	5	15.6	-	--
Call Back to O. R. as Necessary	1	3.1	-	--
Permanent Shift Full Time	2	6.2	-	--
Permanent Shift Part Time	-	--	1	3.1
Other	-	--	-	--
No Response	-	--	29	90.6

Table 30

Frequency and Percentage Distribution of Patients Worked with per Week, Preoperative Visits per Week, and Postoperative Visits per Week

Category	First Position		Second Position	
	F	%	F	%
86. Patients Worked with per Week				
None	-	--	-	--
1 - 4	3	9.4	-	--
5 - 9	4	12.5	-	--
10 - 14	9	28.1	-	--
15 - 19	6	18.7	-	--
20 - 24	4	12.5	-	--
More than 24	6	18.7	-	--
No Response	-	--	32	100.0

Table 30 (continued)

Category	First Position		Second Position	
	F	%	F	%
Preoperative Visits per Week				
None	15	46.9	-	--
1 - 4	11	34.4	-	--
5 - 9	5	15.6	-	--
10 - 14	-	--	-	--
15 - 19	-	--	-	--
20 - 24	-	--	-	--
More than 24	-	--	-	--
No Response	1	3.1	32	100.0
Postoperative Visits per Week				
None	24	75.0	-	--
1 - 4	3	9.4	-	--
5 - 9	3	9.4	-	--
10 - 14	-	--	-	--
15 - 19	-	--	-	--
20 - 24	-	--	-	--
More than 24	-	--	-	--
No Response	2	6.2	32	100.0

Preoperative Visits per Week

The majority of the respondents (46.9%) indicated they did not perform preoperative visits; 11 (34.4%) performed 1 - 4; five; (15.6%) performed 5 - 9; none performed more than nine; and one (3.1%) chose not to reply. (See Table 30.)

Postoperative Visits per Week

The majority of the respondents (75.0%) indicated they did not perform postoperative visits; three (9.4%) performed 1 - 4; three (9.4%) performed 5 - 9; and two (6.2%) did not reply. (See Table 30.)

Objective 11: To determine the graduates' post program involvement in continuing education - Questions 87-95.

O. R. Association Membership

Fourteen respondents (34.1%) indicated they were members of an Alberta O. R. association; 25 (61.0%) replied No to this question; two (4.9%) chose not to respond. One respondent stated that she was an elected member of her association, in the capacity of treasurer. (See Table 31).

O. R. Nursing Journal Reading Habits

Thirty respondents (73.2%) indicated they read O. R. nursing journals. Of these, 12 read them regularly and 18 seldom read them. Eleven respondents (26.8%) stated that they do not read O. R. nursing journals. (See Table 31.)

Courses Towards Nursing Certificate

Three respondents (7.3%) indicated they have taken courses towards a nursing certificate since the F. O. R. N. Program. One commented that

her courses were in advanced orthopedics. The majority of the respondents (92.7%) stated that they had not taken any courses. (See Table 31.)

Courses Towards University Degree

Six respondents (14.6%) have taken courses towards a university degree; and 35 (85.4%) have not taken courses toward a degree. (See Table 31.)

Interest in Taking Advanced O. R. Program

Twenty-one (51.2%) of the respondents indicated they would take an advanced O. R. nursing program. The comments were:

1. Yes in the future.
2. Yes, but not for about two years.
3. I would consider it.
4. Judging from the second-hand evaluations I have had so far - I have a long way to go.
5. If I move to a larger hospital with more complicated types of surgery.
6. If I choose to get into a management role.
7. I might - not totally sure.

Nineteen (46.4%) respondents stated they would not take an advanced O. R. nursing program. One of these commented that she feels it is not necessary. One (2.4%) respondent chose not to answer this question. (See Table 31.)

Table 31

Frequency and Percentage Distribution of Post-F. O. R. N. Program Continuing Education Activities

Item	Category					
	Yes		No		No Response	
	F	%	F	%	F	%
87. Are you a member of an operating room association?	14	34.1	25	61.0	2	4.9
88. Are you an elected member on an operating room association committee?	1	2.4	39	95.2	1	2.4
89. Do you read operating room nursing journals?	30	73.2	11	26.8	-	--
90. Have you taken any courses towards a nursing certificate since completion of this program?	3	7.3	38	92.7	-	--
91. Have you taken any courses towards a university degree since completion of this program?	6	14.6	35	85.4	-	--
92. Would you take an advanced operating room nursing program?	21	51.2	19	46.4	1	2.4
93. Do you plan to further your nursing education in the future?	26	63.4	11	26.8	4	9.8

Future Nursing Education Plans

The majority of the respondents (63.4%) indicated they would further their nursing education in the future. Their comments were as follows:

1. B.Sc. in nursing (6)
2. Advanced O. R. program when available (2)
3. Not as far as B.Sc. but perhaps A. A. R. N. recognized courses (1)
4. In O. R. or Emergency area (1)
5. As to what degree I am not sure, but the thought is there (1).

Eleven respondents (26.8%) stated they do not plan further education in nursing. They commented as follows:

1. I am really not sure; I just got out of school.
2. Unsure.
3. Perhaps.
4. Not immediate future.
5. For the time, money and effort spent on nursing education - the rewards are not great; especially money.

Four (9.8%) respondents chose not to answer this question. (See Table 31.)

F. O. R. N. Program for University Credit

The majority of the respondents (87.8%) felt that the F. O. R. N. Program should be offered for university credit. Comments received were:

1. !!!! YES.
2. But only if you are considering it toward a specialty degree.

3. If one was specializing in O. R. nursing.

4. With the amount of work involved in this course it should be offered for credit.

Four respondents (9.8%) indicated No Response:

1. Not detailed enough--perhaps if it was six months long.

2. Really indifferent.

One respondent (2.4%) chose not to reply. (See Table 32.)

B. Sc. N. for Entry into Nursing Practice

Four (9.8%) respondents agreed with the A. A. R. N. statement that a B. Sc. N. should be a requirement for entry into nursing practice in the future. Thirty-four (82.9%) said No. A variety of comments were received. Due to the length of some of the comments they are briefly summarized here:

1. Does not necessarily improve nursing knowledge or ability.

2. Theoretically I agree, but in reality it would attract too few nurses, leading to a shortage.

3. Diploma graduates get more hands on experience, and can better deal with the realities of ward nursing.

4. The B. Sc. N. graduate is more equipped to deal with paperwork/administration.

5. You don't need a B. Sc. N. to do bedside nursing.

6. A degree belongs to management, teaching and nursing research.

7. it is much more important for a bedside nurse to have practical skills; I feel strongly about this.

8. Should combine with knowledge/theory taught in nursing diploma program for direct patient care rather than a degree.

9. Undecided--lots of pros and cons.

10. Not necessarily so.

11. Assuming this is a serious question--NO!

12. B. Sc. program simply does not have enough practical experience to produce a competent nurse.

13. Half the abstract theory is irrelevant.

14. Compassion and kindness together with knowledge and organization are not necessarily obtained at University; much of what we learn comes after graduation.

15. Experience makes a good nurse whether she has a degree or not.

16. Nursing would be better to have specialized nurses with emphasis in specific patient care areas.

17. A waste of education dollars; B. Sc. N. graduates will not be interested in providing basic nursing care on general wards.

18. It's not for everyone.

Three (7.3%) respondents chose not to reply to this question. (See Table 32.)

Open Ended Comments - Graduates

The graduates were asked to make any additional comments and/or to elaborate on any of the points in the questionnaire. From these comments is appears that the majority of the respondents were satisfied with their experience in the F. O. R. N. program. The main areas of concern appear to be lack of preparation for daily management and organizational skills, and the unrealistic expectations of them during their transition phase from student to staff. Four of the respondents indicated that they discovered they were not satisfied with O. R.

Table 32

Frequency and Percentage Distribution of F. O. R. N. Program for University Credit, and B. Sc. N. for Entry into Nursing Practice

Item	Category					
	Yes		No		No Response	
	F	%	F	%	F	%
94. Do you feel that the F. O. R. N. Program should be offered for university credit?	36	87.8	4	9.8	1	2.4
95. Do you agree with the A. A. R. N. statement that a B. Sc. N. should be a requirement for entry into nursing practice in the future?	4	9.8	34	82.9	3	7.3

nursing, and that they have since returned to other nursing specialties (see Appendix F for a summary of the comments).

Objective 12: To determine the graduates' first Operating Room Supervisors' perceptions of the graduates' preparation for O. R. nursing (with graduates' permission).

Twenty graduates consented to my contacting their supervisors. A total of 10 supervisors were mailed the Follow-Up Study Questionnaire - Supervisors (see Appendix F). The data from the responses was analyzed utilizing descriptive statistics. First, a profile of the supervisors is presented. Second, the skills and qualities of "junior staff members" are outlined by rank order according to the relevance the supervisor places on each and the level at which the supervisors perceived the F. O. R. N. Program graduates' performance of the skills and display of the qualities. Third, supervisors' perceptions of a need for post graduate O. R. Programs is presented. Fourth, the supervisors' response to a B. Sc. N. for entry into nursing practice is presented.

Profile of Supervisors

1. The term which best describes your position is:

Five (50.0%) of the respondents indicated the position of Area Supervisor; four (40.0%) indicated the position of Unit Supervisor; and one (10.0%) indicated Other--management of operating room, recovery room and trauma. (See Table 33.)

2. Length of time in above position is:

One (10.0%) of the respondents has been in her management position for less than one year; two (20.0%) for one year to two years, eleven months; four (40.0%) for three years to five years, eleven months; and three (30.0%) for more than six years. (See Table 33.)

3. Number of staff for which you are directly responsible during a shift is:

Two of the respondents (20.0%) indicated they were responsible for four to six staff; three (30.0%) for seven to 10 staff; and five (50.0%) for more than 10 staff. (See Table 34.)

4. Number of F. O. R. N. Program graduates who are on staff in your operating room is:

The majority of the respondents (50.0%) indicated there were one to three F. O. R. N. Program graduates on staff; one (10.0%) indicated four to six; none indicated seven to ten; and four (40.0%) indicated more than ten graduates on staff. (See Table 34.)

5. Have you taken a post R. N. Operating Room Program?

Three (30.0%) of the respondents indicated they have not taken a post R. N. Operating Room Program; seven (70.0%) replied Yes to this question. Those who commented indicated they have taken either an advanced O. R. Technique and Management Program (3) or the F. O. R. N. Program (1). Three respondents did not indicate the type of program taken. (See Table 35.)

Table 33

Frequency and Percentage Distribution of Supervisory Position, and Length of Time in Position

Category	Frequency	Percentage
1. Supervisory Position		
Area Supervisor	5	50.0
Unit Supervisor	4	40.0
Other	1	10.0
2. Length of Time in Position		
Less than One Year	1	10.0
1 Year - 2 Years, 11 Months	2	20.0
3 Years - 5 Years, 11 months	4	40.0
More than 6 Years	3	30.0

Table 34

Frequency and Percentage Distribution of Number of Staff Supervised, and Number of F. O. R. N. Program Graduates on Staff

Category	Frequency	Percentage
3. Number of Staff Supervised		
1 - 3	-	--
4 - 6	2	20.0
7 - 10	3	30.0
More than 10	5	50.0
4. Number of F. O. R. N. Graduates on Staff		
1 - 3	5	50.0
4 - 6	1	10.0
7 - 10	-	--
More than 10	4	40.0

Table 35

Frequency and Percentage Distribution of Post R. N. Program in O. R. Nursing

Category	Frequency	Percentage
5. Post R. N. Program in O. R. Nursing		
Yes	7	70.0
No	3	30.0

Skills and Qualities

Questions 6 through 52 required two responses. The first response was in reply to the perception of relevance of skills and qualities, and the second response referred to the graduates meeting this standard of relevance. The responses along with a brief description of each are outlined below.

Column A addresses the relevance you place on each of the selected skills/qualities, in a "junior" staff member.

Column B asks your perception of how well the graduate of the F. O. R. N. Program performed the skills/displayed the qualities.

Column A - Response 1

Not Applicable	1	Not necessary for role
Irrelevant	2	Unrelated to role
Relevant	3	Applies in some aspects of role
Very Relevant	4	Applies in most aspects of role
Extremely Relevant	5	Absolutely necessary in role

Column B - Response 2

Not at all	1	Never
Poorly	2	Below average standards
Somewhat	3	Maintained average standards
Very Well	4	Above average standards
Extremely Well	5	Exceptional

The skills and qualities items in this section of the questionnaire were organized according to the following headings:

Headings	Items
Skills	
Aseptic Technique	7 - 10
Scrub and Circulating Roles	11 - 15
Patient Preparation	16 - 19
Cardiac Arrest	20
Anaesthetic Assistance	21
Perioperative Visits	6, 22 - 24
Surgical Count	25
Documentation	26
Equipment Preparation	27 - 29
Specimen Care	30
Recovery Room Nursing	31
Qualities	
Patient Advocacy	32
Personal Attributes	33 - 43
Peer Sharing	44 - 47
Nursing Limitations and Policy	48 - 49
Self Evaluation	50 - 52

The items are presented in rank order, by mean, in terms of the relevance and level of graduate performance, as perceived by the respondents. (See Tables 36 and 37.)

The majority of the skills items (76.9%) received a mean rating between 4.0 and 5.0 in terms of the respondents perceived relevance of

the items. Means of 3.3 to 3.8 were received in four (15.4%) of the items, and two (7.7%) items received means of less than 3.0. In terms of the graduates performance of these skills, 13 (50.0%) received a mean rating of 4.0 - 4.7; 11 (42.3%) received a rating of 3.4 - 3.9; and two (7.7%) a rating of less than 3.0. (See Table 36).

The top ten items of relevance dealt with aseptic technique (4 of 4), scrub and circulating roles (1 of 5), patient preparation (3 of 4), surgical count (1 of 1), and specimen care (1 of 1). Eight of these items were included in the top ten when rated for graduates' performance. The five items identified as having least relevance were anaesthetic assistance (1 of 1), perioperative visits (3 of 3), and recovery room nursing (1 of 1). These five items were also rated lowest for performance.

The majority of the qualities item (95.2%) received a mean rating between 4.2 and 4.9 in terms of item relevance. A mean of 3.8 was received on one (4.8%) of the items. The graduates' display of these qualities received a mean of 4.0 to 4.6 on 16 (76.2%) of the items and a means of 3.1 to 3.9 on the remaining five (23.8%) of the items. (See Table 37.)

Table 36

Rank Order of Relevance of Skills in a "Junior Staff Member", and Perception of How Well the F. O. R. N. Graduate Performed Skills

Indicate the Relevance you Place on Each Skill		Item		How Well Did the F. O. R. N. Program Graduate Perform Skills	
Rank	Mean			Rank	Mean
1	5.0	9.	Follows scrubbing, gowning, gloving procedures	1	4.7
2	5.0	25.	Performs surgical count	4	4.2
3	4.9	8.	Checks supplies for sterility indicators	2	4.4
4	4.8	7.	Applies principles of asepsis	6	4.1
5	4.8	17.	Applies prepping principles	8	4.1
6	4.7	10.	Prepares sterile set-up for cases	3	4.2
7	4.7	18.	Applies draping principles	11	4.0
8	4.7	30.	Cares for specimens	13	4.0
9	4.6	12.	Assures surgeon's preferences on set-up	7	4.1
10	4.6	19.	Uses equipment appropriately	12	4.0
11	4.5	29.	Prepares electrosurgical equipment	16	3.9
12	4.4	14.	Correctly hands instruments	5	4.2

Table 36 (continued)

Indicate the Relevance you Place on Each Skill		Item		How Well Did the F. O. R. N. Program Graduate Perform Skills	
Rank	Mean			Rank	Mean
13	4.4	15.	Anticipates surgical team's needs	14	3.9
14	4.4	28.	Prepares electrosurgical equipment	15	3.9
15	4.4	6.	Assesses patient's needs	9	4.0
16	4.3	13.	Correctly identifies instruments	10	4.0
17	4.3	26.	Completes documentation	17	3.8
18	4.2	11.	Applies surgical procedure definitions	18	3.7
19	4.2	16.	Applies positioning principles	19	3.7
20	4.0	20.	Follows cardiac arrest procedure	21	3.5
21	3.8	27.	Applies pneumatic tourniquet by procedure	20	3.6
22	3.7	21.	Assists anaesthetist as necessary	22	3.5
23	3.4	23.	Communicates visit results to health team	24	3.4
24	3.3	22.	Preoperatively visits patient	23	3.4
25	2.9	31.	Cares for patient in recovery room	25	2.9
26	2.7	24.	Postoperatively visits patient	26	2.2

Table 37

Rank Order of Relevance of Qualities in a "Junior Staff Member", and Perception of How Well the F. O. R. N. Graduate Displayed Qualities

Indicate the Relevance you Place on Each Quality		Items		How Well Did the F. O. R. N. Program Graduate Display Qualities?	
Rank	Mean			Rank	Mean
1	4.9	35.	Eager to learn	1	4.6
2	4.9	49.	Follows operating room policy	10	4.3
3	4.9	50.	Seeks guidance as necessary	11	4.3
4	4.8	47.	Communicates with team members	9	4.3
5	4.7	42.	Is dependable	8	4.3
6	4.7	43.	Adaptable to non-routine situations	16	4.0
7	4.7	48.	Remains within nursing staff limitations	14	4.1
8	4.6	34.	Works as a team members	3	4.5
9	4.6	37.	Plans ahead (case to case)	6	4.3
10	4.6	39.	Punctual	2	4.6
11	4.5	41.	Has positive attitude toward work	4	4.5
12	4.5	38.	Organized	15	4.0
13	4.5	44.	Willing to teach others	12	4.1
14	4.5	51.	Evaluates own performance	20	3.4

Table 37 (continued)

Indicate the Relevance you Place on Each Quality		Items		How Well Did the F. O. R. N. Program Graduate Display Qualities?	
Rank	Mean			Rank	Mean
15	4.5	52.	Seeks feedback on performance	19	3.6
16	4.4	40.	Takes initiative	7	4.3
17	4.3	45.	Accepts constructive criticism	13	4.1
18	4.3	32.	Acts as patient advocate	17	3.9
19	4.3	33.	Gets along well with others	5	4.3
20	4.2	36.	Makes routine decisions	18	3.9
21	3.8	46.	Gives constructive criticism	21	3.1

The top ten items of relevance dealt with personal attributes (6 of 11), nursing limitations and policy (2 of 2), peer sharing (1 of 4), and self evaluation (1 of 3). Seven of the items appeared in the top ten in terms of graduates' ratings. The item of least relevance, with a mean of less than 4, was patient advocacy. This item also received the lowest graduate rating.

Supervisors' Perception of Need for Post Graduate O. R. Programs

53. How would you rate the overall F. O. R. N. Program graduates' performance with that of staff trained on the job?

The majority of the respondents (80.0%) rated the graduates performance as superior to that of staff trained on the job; two (20.0%) rated performance as about the same; and none rated performance as inferior. (See Table 38.)

Table 38

Frequency and Percentage Distribution of Rating of F. O. R. N. Program Graduates' Performance Compared to Staff Trained on Job

Category	Frequency	Percentage
53. Rating of Performance		
Performance is Superior	8	80.0
Performance is About the Same	2	20.0
Performance is Inferior	-	--

54. Do you feel there is a need for this program?

The majority of respondents (90.0%) answered Yes to this question; one (10.0%) answered No. She stated that a good orientation program including theory and clinical practice would be sufficient to prepare capable O. R. nurses. (See Table 39.)

55. Do you perceive a need for a more advanced program for operating room nurses?

Eight (80.0%) of the respondents indicated they felt there was a need for a more advanced O. R. Program; two (20.0%) replied No to this question. (See Table 39.)

Table 39

Frequency and Percentage Distribution of Need for F. O. R. N. Program, Need for Advanced O. R. Program, and Type of Advanced Program Preferred

Category	Frequency	Percentage
54. Need for F. O. R. N. Program		
Yes	9	90.0
No	1	10.0
55. Need for Advanced O. R. Program		
Yes	8	80.0
No	2	20.0
56. Type of Advanced Program Preferred		
Hospital Based Program - Certificate	4	40.0
University Based Program - Credit Toward B. Sc. N.	3	30.0
Other	1	10.0
No Response	2	20.0

56. If yes, would you prefer a:

The preferred choices of type of advanced O. R. Program were Hospital based - Certification (40.0%); University based - Credit toward B. Sc. N. (30.0%); and in the Other category (10.0%) the response was a combination of both. (See Table 39.)

B. Sc. N. for Entry Into Nursing Practice

57. Do you agree with the A. A. R. N. statement that a "B. Sc. N. should be a requirement for entry into nursing practice in the future"?

In response to this question, two respondents (20.0%) indicated agreement; and eight (80.0%) indicated disagreement. The comments made were:

1. Not if you want to be a general duty nurse (2)
2. Who would do the actual work? (1)
3. Only if you aspire to be more than a ward nurse (1)
4. I'd rather see O. R. nursing put back in the R. N. program (1)
5. Not all people are B. Sc. N. material, but make good nurses with present R. N. training (1)
6. B. Sc. N. doesn't train anyone to step into a specialized area such as the O. R. (1). (See Table 40.)

Open Ended Comments - Supervisors

58. Do you have any suggestions or recommendations which would assist in preparing future F. O. R. N. Program graduates for practice and employment?

Several comments were received in response to this question. Even though not all are suggestions or recommendations they are listed here:

Table 40

Frequency and Percentage Distribution of Agreement with A. A. R. N. Statement that a B. Sc. N. Should be a Requirement for Entry into Nursing Practice in the Future

Category	Frequency	Percentage
57. B. Sc N. for Entry into Practice		
Yes	2	20.0
No	8	80.0

1. Pay more attention to students clinical performance, even if scholastically the student is excelling; mechanical, technical and common sense are musts in the clinical area (1)

2. Nurses should spend more time in all clinical areas, which may mean a longer course; this should increase confidence, as the O. R. is more than general surgery and gynaecology (1)

3. The new graduates tend to hold back on giving constructive criticism (1)

4. Overall graduate performance is above average; a few are borderline though (1)

5. We need this program as R. N. graduates are not trained long enough in O. R. skills (1)

6. We need a more advanced O. R. program with more indepth study of O. R. nursing (1)

7. This program appears to have given confidence to new staff nurses who are finding their place in the O. R. "pecking" order (1)

8. I would start on organizing a more advanced O. R. program for nurses and have a rigid O. R. orientation program for new R. N. graduates, provided by hospitals (1)

9. If selected with care these nurses can be an asset to any O. R. (1).

Objective 13: To determine any unexpected outcomes from the program.

This objective is addressed in Chapter V, Summary, Conclusions and Recommendations.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study, a discussion of the conclusions drawn from the graduates' and supervisors' responses, recommendations for future "Fundamentals in Operating Room Nursing Program" administration and planning, and for future operating room nursing education.

Summary

Purpose, Significance

Ten groups of graduates, average six per class, have completed the "Fundamentals in Operating Room Nursing Program". Although a final program evaluation was completed by each graduate, no formal follow-up study of the program had been undertaken. The purpose of this study was to obtain information from the graduates and their first operating room supervisors, which could be used to assess the programs' strengths and deficits, for guiding future program revision and planning, and as a support for continuation of the program.

Information obtained through follow-up of graduates of educational programs and their employers can be a useful source of feedback. The graduates can indicate how well the program met their learning needs and prepared them for employment, and as well can provide input for program modification. The information obtained from their employers can indicate the employers' expectations of new staff, the graduates' level of preparation and performance, how well he/she adapts to the role of employee, and can provide suggestions for future program revision.

Objectives

The objectives for the study were developed with input from nursing administration and education, operating room management and education personnel, the program outline and objectives, from a review of the available final program evaluations completed by the graduates, and from the review of the literature. The variables addressed in the graduate follow-up were demographics, pre-program educational and employment background, incentives to take the program, graduate response to the relevance of program elements as preparation for operating room nursing practices, areas for modification, areas of conflict, post-program employment profile, and continuing education activities. The variables included in the supervisor follow-up were supervisory experience, relevance of selected skills and qualities in "junior" staff members, perceptions of the graduates performance, and need for operating room nursing education programs.

Relationship of the Literature Review to This Study

Implicit throughout the literature on evaluation is the concept of decision-making. In developing the approach taken in this study the educational and administrative personnel responsible for the program were identified as the key recipients of the results and findings.

A review was made of the literature on program evaluation, evaluation theories and models, evaluation approaches, follow-up strategies, and evaluation studies in nursing.

The review led to development of the following set of 10 guidelines for design, plan and implementation of this study:

1. Identification of the decision-makers.

2. Assessment of program stage on which the evaluation will focus.

3. Decision as to the participants of the study.

4. Formulation of objectives for the study.

5. Decision as to follow-up method.

6. Development of an appropriate instrument for data collection--based on objectives and method of follow-up.

7. Administration of the instrument.

8. Analysis of collected data.

9. Summary and recommendations--based on data analysis.

10. Submission of findings to decision-makers.

Methodology

Subjects

All graduates of the "Fundamentals in Operating Room Nursing Program" were included in this study in order to obtain a retrospective-subjective response to the program. With consent of each graduate, her first operating room supervisor following graduation was included in the study in order to obtain her response to the graduate's preparation for and performance of operating room nursing practice.

Instrumentation

The method used for this study was the mail questionnaire follow-up. The graduate questionnaire was based on the variables as outlined in the objectives for the study. It was pilot tested with a group of operating room nurses who had taken an advanced program in operating room technique and management. Suggestions for changes were made and agreement reached as to the questionnaire's credibility.

The supervisor's questionnaire was designed to reflect the relevance supervisors placed on selected skills and qualities of "junior" operating room nurses, and how well the graduates rated on these skills and qualities in their first three months of practice. The questionnaire was developed with input from nursing administration and operating room nursing education personnel. It was felt that their input and agreement as to the suitability of the questionnaire gave it credibility. Therefore, no pilot was done.

Data Collection

The mail system was used for distribution and return of the questionnaires. The graduate questionnaire was mailed with the assistance of the Alberta Association of Registered Nurses. A follow-up mailing was undertaken four weeks following the first mailing. A six week deadline was allowed for final return of the graduate questionnaire. In the sixth week the supervisors' questionnaire was mailed. A follow-up phone call was made to non-respondents in the fourth week following first mailing. Eighty percent (n = 48) of the graduates responded; 85% (n = 41) of the responses were useable. One hundred percent (n = 10) of the supervisors responded; all responses were useable.

Data Treatment

Descriptive statistics were applied to the data. Statistical analysis included frequency and percentage distributions, mean ranking,and content analysis of open ended comments.

Analysis and Findings

Summary of Findings - Graduates

The majority of the respondents were under 30, single, childless, and indicated no change of residence following the F. O. R. N. program. They completed both high school and their R. N. programs after 1975, indicating that they chose nursing early in their career plans. The most common choice of R. N. program was a two-year hospital or college based program. Most had less than 10 days O. R. experience in their R.N. program.

As few as one and as many as seven graduates from each of the F. O. R. N. program classes responded to this study. The majority indicated an overall average grade of over 80% in theory.

The majority were employed as staff nurses on surgical or medical wards in hospitals before entering the program, and had less than three years nursing experience. Most had no previous O. R. experience.

The majority had heard about the F. O. R. N. program from nursing personnel or through personal inquiry. The main reason for taking the program was a desire for change. Eighty percent were self-financed while taking the program. Half were guaranteed O. R. employment upon graduation; two-thirds were guaranteed employment in some area of nursing.

In terms of relevance of the program elements in meeting their learning needs, a mean rating of less than 3.5 (3 - relevant, 4 - very relevant) was received on eight items. These ranged from 3.46 to 3.02. The items in decreasing order of relevance were administration-student support, medical staff-student support, pre-program information,

experience with postoperative patient visits, unit supervisor evaluation, personnel introductions, self-evaluation, and nursing staff-student support.

The 10 most relevant items received a mean rating of 4.63 to 4.07. In decreasing order of relevance these items were instructor-student support, introduction to aseptic technique, student-student support, nursing care of the anaesthetized patient, timing of exams with theory, sharing of concerns with peers, scrub role experience, number of exams, quality of exams as test of theory, and clinical experience - gynecology.

In response to the question of program modification the responses indicated that few changes were required in the program's theoretical and clinical content. The main suggestions for change dealt with adding more clinical experiences, increasing skills lab time, extending program by one month, adding theory on nonroutine O. R. nursing care and procedures, and emphasis on daily O. R. theatre management. The majority felt that there was very little conflict with other learners in the clinical setting, although occasionally new staff and other students did interfere with their choices of experiences.

Seventy-five percent of the respondents worked in an operating room following graduation from the program. Most worked as staff nurses in hospitals of more than 500 beds. Only three indicated second O. R. nursing employment positions. The majority had been employed for less than two years. Educational premium received varied, with the most common amount cited being from $0.01 to $0.20.

The majority worked in operating rooms with more than five theatres; most indicated more than 10 theatres. The most frequently cited types of surgery were general surgery, E. N. T., gynecology, orthopedics, and plastic surgery. The most frequent type of assignment was rotation to each surgical service every one to two months. Only two rotated to recovery room; five were specific service assignments on a permanent basis.

All respondents indicated they worked directly with patients every week. The majority indicated more than 10 patients. Preoperative visits were performed on fewer than five patients per week, and most respondents did not perform postoperative visits.

In terms of continuing education the majority do not belong to an O. R. association, only occasionally read O. R. nursing journals and have not taken courses for other nursing certificate or degree since graduation. Most indicate plans to further their nursing education in the future. Approximately half indicated they would take an advanced O. R. nursing program, and one quarter indicated interest in a Nursing degree.

The majority felt that the F. O. R. N. program should be offered for university credit. Only four respondents agreed that a B. Sc. N. should be a requirement for entry into nursing practice in the future.

Summary of Findings - Supervisors

The majority of the supervisors have been in their present positions for more than three years and are responsible for more than seven staff; five for more than 10. All have at least one F. O. R. N.

program graduate on staff; four have more than 10. Seven indicated that they have taken a post R. N. operating room nursing program.

They rated the majority of the skills items (76.9%) as being very relevant to extremely relevant to the role of a "junior" staff member in an Operating Room. They indicated that the F. O. R. N. program graduates performed the majority of these identified skills at above average standards. The item of highest relevance was aseptic technique. The items of least relevance were perioperative visits and recovery room nursing, and the supervisors perceived that the graduates performed these skills least well.

The qualities items (95.2%) were rated as being very relevant to extremely relevant for "junior" staff members in an operating room. Indicators were that the F. O. R. N. program graduates displayed the majority of these qualities at above average standards. The items of highest relevance were personal attributes, and remaining within nursing limitations and policy. The item of least relevance was patient advocacy. The graduates were rated lowest on this item.

The overall performance of the graduates was rated as superior to that of staff trained on the job. All but one of the supervisors sampled felt that there is a need for the F. O. R. N. program, and eight perceived a need for a more advanced O. R. nursing program. Given the choice of a certificate or university based program, four chose the certificate, three chose university, and one chose a combination of both.

In response to the statement that a B. Sc. N. should be a requirement for entry into nursing practice in the future, eight supervisors disagreed.

Conclusions

The following conclusions were drawn from the findings of this study:

Graduates' Responses

1. The program is meeting the needs of nurses who wish to achieve basic competencies in operating room nursing theory and clinical abilities. The majority of the program's participants did not have any active experience in the operating room as nursing students.

2. The nurses who take this program have had previous medical or surgical ward nursing orientation. They view nursing in the operating room as a career change.

3. These nurses desire a change in career early in their nursing practice, or choose the operating room as a first career choice.

4. The graduates of the program expect that the experience of the program will enhance their chances of obtaining employment in an operating room. Seventy-five percent of the graduates were employed in an operating room after completing the program. This suggests that supervisors honor the experience gained.

5. The majority of the graduates find employment in hospitals of over 500 beds. This trend may be due to the more frequent staff changeovers in larger hospitals, thus affording employment opportunities not usually available in smaller centres. The nurses from smaller centres usually return to guaranteed employment in the operating room.

6. Preoperative and postoperative patient visits were viewed as low in importance in meeting the graduates' learning needs. This may be because as students their orientation and focus is on learning direct operating room nursing care. With experience the importance of perioperative visits may change.

7. The graduates indicated an interest in furthering their education, especially at an advanced level of operating room skills and management. This suggests the need for development of more advanced programs for operating room nurses.

8. The majority of the graduates felt that the program was worthy of university credit, although they did not think that a B. Sc. N. was required for practice. This suggests that they are satisfied with their present level of nursing education for general ward practice.

9. The graduates, who agreed that a B. Sc. N. should be required for nursing practice in the future, stated that it would be necessary for advancement and promotion opportunities. This may indicate that their perception of the B. Sc. N. is less bedside practice oriented, and more focused on upward mobility.

10. The program was viewed as a must for nurses who wish to work in an operating room.

11. The graduates felt that more emphasis should be placed on completing routine organizational skills required for the daily routine of managing a room, such that it would better prepare them for the transition to staff nurse.

Supervisors' Responses

1. The supervisors overall educational and management experience qualified them as capable evaluators of the graduates.

2. The graduates were rated as above average in skills expected in a "junior" staff nurse. They rated highest in the skills requiring knowledge and practice of aseptic technique, and lowest in skills required for perioperative patient visits and recovery room nursing. The performance of these skills reflected the supervisors' expectation and perception of the relevance of these skills.

3. The graduates were rated as above average in the qualities expected in a "junior" staff nurse. They rated highest in personal attributes and adherence to policy and limitations, and lowest in self-evaluation and feedback practices, initiative to make decisions and patient advocacy. The display of these qualities reflected the supervisors' expectations.

4. The performance of the graduates was perceived as being superior to that of staff who have not taken the "Fundamentals in Operating Room Nursing Program". This suggests that the program is a useful method of preparing nurses for the practice of operating room nursing.

5. The supervisors indicated that there is a need for continuation of this program in order to teach the basics required to prepare nurses for the practice of operating room nursing.

6. Operating room supervisor agree that an advanced program in operating room nursing is needed. There are mixed feelings as to

whether this program should be offered for university credit, or for certificate in operating room nursing expertise.

7. The majority of the supervisors indicated a B. Sc. N. for entry into nursing practice in the future is not necessary. This may suggest that they are satisfied with the present educational system or that they are not familiar with the competencies of the B. Sc. N. prepared graduate. It is unknown if the supervisors are university prepared nursing graduates.

Unexpected Outcomes

There were three unexpected findings from this study:

1. The low rating in terms of importance of perioperative patient visits by both the graduates and their supervisors.

2. The supervisor's low rating of the relevance of the employee as patient advocate.

3. The low agreement of both groups of participants with the future orientation of B. Sc. N. for entry into nursing practice.

Recommendations

The findings from this study are representative of the study participants and do not necessarily reflect the views of other operating room personnel. Generalizeability is limited. Based on these findings it is recommended that:

1. The program be continued.

2. Future programs include more focus on basic organizational skills.

3. An advanced level operating room nursing program be developed.

4. Work begin on acceptance of operating room nursing programs for university credit.

5. Studies be undertaken to assess the operating room nurses' perceptions of perioperative patient visits.

6. The questionnaires used in this study be adapted for other research (e.g., orientation program studies).

7. Nursing administration responsible for education develop strategies to promote the value and positive impact of baccalaureate preparation for entry into nursing practice.

BIBLIOGRAPHY

Alkin, M. C.

1969 "Evaluation Theory Development." In Educational Evaluation: Theory and Practice by B. R. Worthan and J. R. Sanders. Belmont, California: Wadsworth Publishing Co., Inc., 150-151. 1973.

Alkin, M. C. and C. T. Fitzgibbon

1975 "Methods and theories of evaluating programs," Journal of Research and Development in Education, 8, (3), 2-15.

Anderson, S. B. and S. Ball

1978 The Profession and Practice of Program Evaluation. San Francisco: Josey-Bass Publishers.

Backstrom, C. H. and C. D. Hursh

1963 Survey Research. Minneapolis: Northwestern University Press.

Berk, R. A.

1981 Educational Evaluation Methodology: The State of the Art. Baltimore: Hopkins University Press.

Bloch, D.

1975 "Evaluation of nursing care in terms of process and outcome: Issues in research and quality assurance," Nursing Research, 24, (4), 256-263.

Campbell, I. E. and P. A. Field

1983 "A follow-up survey of graduates from the Advanced Practial Obstetrics Course, September 1977 to March 1982 (inclusive)," Unpublished report, Faculty of Nursing, University of Alberta, Edmonton, Alberta, Canada.

Clark, T., M. Goodwin M. Mariani, M. Marshall, and S. Moore

1983 "Curriculum evaluation: An application of Stufflebeam's model in a baccalaureate school of nursing, " Journal of Nursing Education, 22, (2), 54-58.

Cronbach, L. J.

1963 "Course improvement through evaluation," Teachers College Record, 64, 672-683.

Donabedian, A.

1969 "Part II - Some issues in evaluating the quality of nursing care," American Journal of Public Health, 59 (10), 1833-1836.

Ediger, J., M. Snyder, and S. Corcoran

1983 "Selecting a model for use in curriculum evaluation," Journal of Nursing Education, 22, (5), 195-199.

Elliot, D.

1982 "A comparative study of the nursing performance of registered nurses awaiting entry to a post-R. N. baccalaureate program with a group of recent graduates." Department of Educational Administration, University of Alberta, Edmonton, Alberta, Canada.

Elliot, D.

1983 "A follow-up study of the 1982 graduates of the Baccalaureate Program in Nursing, University of Alberta." Unpublished report, Faculty of Nursing, University of Alberta, Edmonton, Alberta, Canada.

Faulk, L. G.

1984 "Continuing education program evaluation for course improvement, participant effect and utilization in clinical practice," Journal of Nursing Education, 23, (4), 139-146.

Glaser, R.

1962 "Psychological and instructional technology," In Training Research and Education, edited by R. Glaser. Pittsburg, University of Pittsburg Press.

Good, C. V.

1975 "Dictionary of Education," 3rd. ed. New York: McGraw-Hill Book Company.

Green, J. L. and J. C. Stone

1977 Curriculum Evaluation. New York: Springer Publishing Co.

Groah, L. K.

1983 Operating Room Nursing: The Perioperative Role. Reston, Virginia: Reston Publishing Company, Inc.

Hammond, R. L.

1969 "Evaluation at the Local Level." In Educational Evaluation: Theory and Practice by B. R. Worthen and J. R. Sanders. Belmont, California: Wadsworth Publishing Co., Inc., 157-170, 1973.

Hayter, J.

1963 "A follow-up study of the graduates of the baccalaureate degree program in nursing," Nursing Research, 12, (1), 45-47.

Hayter, J.

1971 "Follow-up Study of graduates of the University of Kentucky, College of Nursing, 1964 - 1969," Nursing Research, 20, (1), 55-60.

Hayter, J.

1978 "A follow-up study of a master's program," Nursing Outlook, 26, (26), 380-385.

Lindeman, C. A.

1976 "Measuring quality of nursing care part II," Journal of Nursing Administration, 6, (7), 9-16.

Luker, K. A.

1981 "An overview of evaluation research in nursing," Journal of Advanced Nursing, 6, (2), 87-93.

McKinney, F.

1977 Program Evaluation in Vocational Education: A Review. Washington, DC: Eric Clearinghouse on Career Education.

Meleis, A. I. and P. Benner

1975 "Process or product evaluation", Nursing Outlook, 23, (5), 303-307.

Oppenheim, A. N.

1966 Questionnaire Design and Attitude Measurement. New York: Basic Books, Inc., Publishers.

Provus, M.

1969 "Evaluation of Ongoing Programs in the Public School System." In Educational Evaluation: Theory and Practice by B. R. Worthen and J. R. Sanders. Belmont, California: Wadsworth Publishing Co., Inc., 171-209, 1973.

Scriven, M.

1967 "The Methodology of Evaluation." In Educational Evaluation: Theory and Practice by B. R. Worthen and J. R. Sanders. Belmont, California: Wadsworth Publishing Co., Inc., 60-106, 1973.

Smillie, C., J. Wong, and M. Arklie

1984 "A proposed framework for evaluation of support courses in a nursing curriculum," Journal of Advanced Nursing, 9, (5), 487-492.

Stake, R. E.

1967 "The countenance of educational evaluation," Teachers College Research, 68, 523-540.

Stufflebeam, D. L.

1971 Educational Evaluation and Decision-making. Itasca, Illinois: F. E. Peacock Publishers, Inc.

Tyler, R. W.

1942 "General statement on evaluation," Journal of Educational Research, 35, 492-501.

Waltz, C. F. and S. B. Bond

1985 "How can a program evaluation be comprehensive and yet cost efficient?" Journal of Nursing Education, 24, (6), 258-261.

Warwick, D. P. and C. A. Lininger

1975 The Sample Survey: Theory and Practice. New York: McGraw-Hill Book Company.

Wentling, T. L. and T. E. Lawson

1975 Evaluating Occupational Education and Training Programs. Boston: Allyn and Bacon, Inc.

Worthen, B. R. and J. R. Sanders

1973 Educational Evaluation: Theory and Practice. Belmont, California: Wadsworth Publishing Co., Inc.

Wright, D.

1984 "An introduction to the evaluation of nursing care: A review of the literature," Journal of Advanced Nursing, 9, (5), 457-467.

Zettinig, P. and N. M. Lang

1981 "Utilization of quality assurance concepts in educational evaluation," Nurse Educator, 6, (4), 24-28.

APPENDIX A

Correspondence - Pilot Study Participants

July 1985

Dear

I am, as you are probably aware, working on my thesis. The topic I have chosen to investigate is program evaluation. My thesis addresses this topic through a follow-up study of the graduates from the Fundamentals in Operating Room Nursing Program.

At this time I am requesting your assistance in piloting my questionnaire for this study. Would you please read it through, and make suggestions and comments as they occur to you? I am interested in your reaction to:

1. the ease with which the questions flow
2. how clearly the questions are stated.
3. if the questions are offensive
4. the number of questions
5. your interpretation of the questions (please answer them)
6. leaving some questions out
7. adding other question
8. the time it takes to complete the questionnaire.

Please make any additional comments and suggestions which you feel will improve the questionnaire, and return it to me by Friday, July 19, 1985 if possible.

Thank you.

Regina Leonard
Surgical Suite
Third Floor, W. M. C.

APPENDIX B

Correspondence - Graduates

10731 - 65 Avenue
Edmonton, Alberta
T6H 1V5
October, 1985

Dear Graduate of the Fundamentals in Operating Room Nursing Program:

My name is Regina Leonard. I am a student in the Masters in Educational Administration Program at the University of Alberta, Edmonton. As a topic for my thesis, I have chosen to conduct a follow-up study of all graduates of the Fundamentals in Operating Room Nursing Program (F. O. R. N. Program) from May 1981 to July 1985. I am requesting your assistance in filling out the attached questionnaire.

The purpose of this follow-up study is to obtain information which may be helpful in guiding future program revision and planning activities. The study addresses your educational background, your perceptions of the program, employment opportunities since the program, and your continuing educational activities. Since no study has been done, to date, you have the opportunity for input into future program revision, planning and success.

Your replies will be confidential and no one will be identified without permission. At this time I ask for your permission to contact your first Operating Room Supervisor, following the program, regarding his/her perceptions of your preparation and skills (see the final page of the questionnaire). Please fill out the questionnaire even if you chose to refuse permission to contact your supervisor. If you do not wish to participate in the study, please return the blank questionnaire to me.

Copies of the completed study will be available at the Education Library, University of Alberta and at the Alberta Association of Registered Nurses Library, Edmonton.

Thank you for your time and anticipated interest in this study. It takes approximately 20 minutes to complete the questionnaire. Please return the questionnaire to me in the enclosed envelope by Thursday, October 31, 1985.

Sincerely,

Regina Leonard

encs.

10731 - 65 Avenue
Edmonton, Alberta
T6H 1V5
November, 1985

Dear Graduate of the Fundamentals in Operating Room Nursing Program:

Four weeks ago you received a follow-up questionnaire regarding the Fundamentals in Operating Room Nursing Program (F. O. R. N. Program). Sixty-five percent of the questionnaires have been returned. Thank you to those of you who have responded. I would still appreciate a response from those who, as yet, have not had the opportunity to complete the questionnaire.

Your participation will provide valuable information which will be helpful in guiding future program revision and planning activities. I request approximately 20 minutes of your time to complete the questionnaire. Please return it to me in the enclosed envelope by Friday, November 29, 1985.

Sincerely,

Regina Leonard

RL:je

enc.

APPENDIX C

Questionnaire - Graduates

Fundamentals in Operating Room Nursing Program
(F. O. R. N. Program)

Follow-Up Study Questionnaire - Graduates

Please answer all questions by circling the number on the right of the most appropriate response, and/or by providing information and comments as indicated. YOUR RESPONSES WILL BE KEPT CONFIDENTIAL.

Definitions

These definitions will assist you in answering Questions 18 and 82.

Staff Nurse:	General Duty responsibility
Head Nurse: Unit Supervisor:	Management responsibility for one or more specific surgical services
Head Nurse Shift:	Management responsibility for evenings, nights
Area Supervisor:	Overall management responsibility for the Operating Room Suite
Instructor:	Educational responsibility for Operating Room personnel
Others:	Responsibility other than as outlined above

Fundamentals in Operating Room Nursing Program
(F. O. R. N. Program)

Follow-Up Study Questionnaire

General Information

Please do not write in this space

1 - 3

1. Your place of residence immediately prior to F. O. R. N. Program was:

Northern Alberta	1	4
North-Central Alberta	2	
Central Alberta	3	
Southern Alberta	4	
South-Central Alberta	5	
Other. Please specify _____	6	

2. Your place of residence at present is:

Northern Alberta	1	5
North-Central Alberta	2	
Central Alberta	3	
Southern Alberta	4	
South-Central Alberta	5	
Other. Please specify _____		

3. Your age in years at commencement of F. O. R. N. Program was:

20 - 24 years	1	6
25 - 29 years	2	
30 - 34 years	3	
35 - 39 years	4	
40 years or more	5	

4. Your marital status at commencement of F. O. R. N. Program was:

Single	1	7
Married	2	
Widowed	3	
Divorced	4	
Other. Please specify _____	5	

General Information, continued

Please do not write in this space

5. Number of children you had at commencement of F. O. R. N. Program was:

None	1	8
One	2	
Two	3	
Three	4	
Four or more	5	

Educational Background

6. Your year of high school graduation was:

Before 1960	1	9
1960 - 1964	2	
1965 - 1969	3	
1970 - 1974	4	
1975 - 1979	5	
After 1980	6	

7. The number of months (class and clinical) from start to completion of your Registered Nurse program was:

Less than 20 months	1	10
20 - 24 months	2	
25 - 29 months	3	
30 - 34 months	4	
35 - 39 months	5	
40 - 44 months	6	
More than 45 months	7	

8. The type of institution in which you completed your Registered Nurse program was:

Hospital	1	11
College	2	
University	3	
Other. Please specify _____	4	

9. Year of graduation from your Registered Nurse Program was:

Before 1960	1	12
1960 - 1964	2	
1965 - 1969	3	
1970 - 1974	4	
1975 - 1979	5	
After 1980	6	

Educational Background, continued

Please do not write in this space

10. Estimated number of days of operating room experience in your Registered Nurse program was:

None	1	13
Less than 5 days	2	
6 - 10 days	3	
11 - 20 days	4	
21 - 30 days	5	
More than 30 days. Please specify _____	6	

11. Type of operating room experience in your Registered Nurse program was:

None	1	14
Observation only	2	
Observation and participation	3	
Mostly participation	4	
Other. Please specify _____	5	

12. Month and year of graduation from the F. O. R. N. Program was:

July 1981	1	15
December 1982	2	
April 1983	3	
July 1983	4	
December 1983	5	
April 1984	6	
August 1984	7	
December 1984	8	
April 1985	9	
July 1985	10	

13. Your average grade in F. O. R. N. Program was:

65 - 69%	1	16
70 - 74%	2	
75 - 79%	3	
80 - 84%	4	
85 - 89%	5	
90 - 94%	6	
95 - 100%	7	

Employment Background

Please do not write in this space

14. Number of years working in nursing (either part time or full time) prior to taking F. O. R. N. Program was:

None	1	17
Less than 1 year	2	
1 year - 2 years, 11 months	3	
3 years - 5 years, 11 months	4	
6 years - 10 years, 11 months	5	
11 years - 15 years	6	
More than 15 years	7	

15. Number of years operating room experience prior to taking F. O. R. N. Program was:

None	1	18
Less than 1 year	2	
1 year - 2 years, 11 months	3	
3 years - 5 years, 11 months	4	
6 years - 10 years, 11 months	5	
11 years - 15 years	6	
More than 15 years	7	

16. Employment status immediately prior to taking F. O. R. N. Program was:

Employed in nursing full time	1	19
Employed in nursing part time	2	
Employed, but not in nursing	3	
Unemployed	4	
Student	5	
Other. Please specify _____	6	

17. If employed in nursing, your area of employment immediately prior to taking F. O. R. N. Program was:

Surgical ward	1	20
Medical ward	2	
Pediatrics	3	
Obstetrics	4	
Emergency	5	
Operating Room	6	
Other. Please specify _____	7	

18. If employed in nursing, your position was: (SEE DEFINITIONS ON PAGE ii.)

Staff Nurse	1	21
Head Nurse, Unit Supervisor	2	
Head Nurse on Shift	3	
Area Supervisor	4	
Instructor	5	
Other. Please specify _____	6	

Please do not write in this space

Influencing Factors

19. You first heard about F. O. R. N. Program through:

The Alberta Association of Registered Nurses	1	22
Acquaintances	2	
Former Student	3	
Instructor	4	
Advertising	5	
Personal Inquiry	6	
Other. Please specify _____	7	

20. Your main reason for taking F. O. R. N. Program was:

Requirement to maintain employment	1	23
Prerequisite for employment	2	
Promotion opportunity	3	
Desire for change	4	
Other. Please specify _____	5	

21. The program was financed by:

Self	1	24
Employing agency	2	
Student loan	3	
Self/Employing agency	4	
Self/Student loan	5	
Employing agency/Student loan	6	
Other. Please specify _____	7	

22. Average number of shifts worked per week (to earn money) while taking F. O. R. N. Program was:

None	1	25
1 shift	2	
2 shifts	3	
3 shifts	4	
4 shifts	5	
5 shifts	6	

23. Employment upon completion of F. O. R. N. Program was:

Guaranteed full time employment in O. R.	1	26
Guaranteed part time employment in O. R.	2	
Not guaranteed employment in O. R.	3	
Not guaranteed employment	4	
Other. Please specify _____	5	

As well as you can recall, please indicate the relevance of each of the following items in meeting your learning needs, while taking the F. O. R. N. Program. Circle the one most appropriate response on the right of each item.

Unrelated/Unnecessary	1	Did not meet any learning needs
Irrelevant	2	Met very few learning needs
Relevant	3	Met some learning needs
Very Relevant	4	Met most learning needs
Extremely Relevant	5	Met all learning needs

Item	Unrelated/ Unnecessary	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Please do not write in this space
24. Pre-program information	1	2	3	4	5	27
25. Program design	1	2	3	4	5	28
26. Clarity of program goals	1	2	3	4	5	29
27. Adequacy of program content	1	2	3	4	5	30
28. Length of program	1	2	3	4	5	31
29. Amount of theory	1	2	3	4	5	32
30. Length of clinical experience	1	2	3	4	5	33
31. Program handouts	1	2	3	4	5	34
32. Program text	1	2	3	4	5	35
33. Work sheet study guides	1	2	3	4	5	36
34. Theoretical introduction to operating room nursing	1	2	3	4	5	37
35. Introduction to aseptic technique	1	2	3	4	5	38
36. Sterilization content	1	2	3	4	5	39
37. Nursing care of the anaesthetized patient	1	2	3	4	5	40
38. Wound management content	1	2	3	4	5	41
39. Equipment orientation	1	2	3	4	5	42
40. Operating room suite orientation	1	2	3	4	5	43

Item	Unrelated/ Unnecessary	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Please do not write in this space
41. Legal issues of operating room nursing	1	2	3	4	5	44
42. Personnel introductions	1	2	3	4	5	45
43. Clinical experience - general surgery	1	2	3	4	5	46
44. Clinical experience - gynaecology	1	2	3	4	5	47
45. Clinical experience - orthopaedics	1	2	3	4	5	48
46. Clinical experience - selected experiences	1	2	3	4	5	49
47. Scrub role experiences	1	2	3	4	5	50
48. Circulating role experiences	1	2	3	4	5	51
49. Instructor-student support	1	2	3	4	5	52
50. Nursing staff-student support	1	2	3	4	5	53
51. Medical staff-student support	1	2	3	4	5	54
52. O. R. administration-student support	1	2	3	4	5	55
53. Student-student support	1	2	3	4	5	56
54. Individual student guidance	1	2	3	4	5	57
55. Individual goal pursuit opportunities	1	2	3	4	5	58
56. Numbers of exams	1	2	3	4	5	59
57. Quality of exams as test of knowledge	1	2	3	4	5	60
58. Timing of exams with theory	1	2	3	4	5	61
59. Individual student presentations	1	2	3	4	5	62

Item	Unrelated/ Unnecessary	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Please do not write in this space
60. Quality of student presentations	1	2	3	4	5	63
61. Experience with pre-operative visits	1	2	3	4	5	64
62. Experience with post-operative visits	1	2	3	4	5	65
63. Student self-evaluations	1	2	3	4	5	66
64. Unit Supervisor evaluations of students	1	2	3	4	5	67
65. Instructor evaluations of students	1	2	3	4	5	68
66. Nursing staff-student feedback	1	2	3	4	5	69
67. Opportunity to evaluate program	1	2	3	4	5	70
68. Opportunity to evaluate instructor	1	2	3	4	5	71
69. Opportunity to work with peers	1	2	3	4	5	72
70. Sharing of concerns with peers	1	2	3	4	5	73
71. Preparation for operating room nursing employment	1	2	3	4	5	74
72. Level of competency development	1	2	3	4	5	75

Based upon your own preparation for O. R. nursing, and in order to improve upon the theoretical and clinical components of F. O. R. N. Program, would you:

		Yes	No	Please do not write in this space 2 / 1 - 3
73.	Delete any theoretical content? Comments:	1	2	4
74.	Delete any clinical experience? Comments:	1	2	5
75.	Revise any theoretical content? Comments:	1	2	6
76.	Revise any clinical experiences? Comments:	1	2	7
77.	Add any theoretical content? Comments:	1	2	8
78.	Add any clinical experience? Comments:	1	2	9
79.	Say there was conflict with other learners for clinical experience? Comments:	1	2	10

Post-F. O. R. N. Program Employment

80.	Since completion of the F. O. R. N. Program, have you worked in an Operating Room?	1	2	11

If you answered YES to question 80, please answer questions 81 - 86.

If you answered NO to question 80, please advance to question 87.

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Please do not write in this space

81. Please indicate the size and location of hospital(s) in which you have worked, since completion of F. O. R. N. Program. SEE QUESTIONS 1 AND 2 FOR LOCATION DESCRIPTION.

e.g.

	First Position
Under 50 Beds	Northern Alta.

		1 First Position	2 Second Position	3 Third Position	
1	Under 50 Beds				12 - 14
2	51 - 100 Beds				15 - 17
3	101 - 300 Beds				18 - 20
4	301 - 500 Beds				
5	More than 500 Beds				

82. Please indicate O. R. nursing positions held, length of employment, and highest amount of educational premium received per hour, in each position, since completion of F. O. R. N. Program. (SEE DEFINITIONS ON PAGE ii.)

e.g.

	First Position
Staff Nurse	2 yrs. / 0.15

		1 First Position	2 Second Position	3 Third Position	
1	Staff Nurse				21 - 26
2	Head Nurse, Unit Supervisor				27 - 32 / 33 - 38
3	Head Nurse Shift				
4	Area Supervisor				
5	Instructor				
6	Other. Please specify				

157

Please do not write in this space

83. Please indicate the number of operating room theatres in the hospitals in which you have worked since completion of the F. O. R. N. Program:

e.g.

	First Position
2 or Less	✓

1 2 3

		First Position	Second Position	Third Position	
1	2 or Less				39 - 40
2	3 - 4				41 - 42
3	5 - 7				43 - 44
4	8 - 10				
5	More than 10				

84. Please indicate the types of surgery routinely performed in the above hospitals: 3 / 1 - 3

e.g.

	First Position
ENT	✓

1 2 3

		First Position	Second Position	Third Position	
1	ENT				4 - 28
2	General Surgery				29 - 53
3	Gynaecology				54 - 78
4	Neurosurgery				
5	Ophthalmology				
6	Orthopaedics				
7	Plastic Surgery				
8	Urology				
9	Vascular				
10	Thoracic				
11	Cardiovascular				
12	Other. Please specify				

158

Please do not write in this space

85. Please select your most frequent method of assignment, and indicate the average length of time, in months, for each position in which you have been employed since completion of the F. O. R. N. Program:

4
1 - 3

e.g.

	First Position
Rotation to Each Service	1 month

		1 First Position	2 Second Position	3 Third Position	
1	Rotation to Each Service				4 - 7
2	Rotation to Each Service Plus Recovery Room				8 - 11 12 - 15
3	Assigned to a Specific Service				
4	Call Back to O.R. as necessary				
5	Permanent Shift Full Time				
6	Permanent Shift Part Time				
7	Other. Please specify				

86. Please indicate the average number of patients you personally work with, per week, and the average number of pre-operative and post-operative visits you perform per week:

e.g.

	First Position
Patients/Week	6

		1 First Position	2 Second Position	3 Third Position	
1	Patients/Week				16 - 22
2	Pre-Op Visits				23 - 29
3	Post-Op Visits				30 - 36

Please do not write in this space

Continuing Education

87. Are you a member of an operating room association?

Yes. Please specify _____	1	37
No	2	

88. Are you an elected member on an operating room association committee?

Yes. Please specify _____	1	38
No	2	

89. Do you read operating room nursing journals?

Yes, regularly	1	39
Yes, seldom	2	
No	3	

	Yes	No	
90. Have you taken any courses towards a nursing certificate since completion of this program? Comments:	1	2	40
91. Have you taken any courses towards a university degree since completion of this program? Comments:	1	2	41
92. Would you take an advanced operating room nursing program? Comments:	1	2	42
93. Do you plan to further your nursing education in the future? Comments:	1	2	43
94. Do you feel that the F. O. R. N. Program should be offered for university credit? Comments:	1	2	44
95. Do you agree with the A. A. R. N. statement that a B. Sc. N. should be a requirement for entry into nursing practice in the future? Comments:	1	2	45

Please feel free to make any additional comments and/or to elaborate on any of the points in the questionnaire.

Thank you,

Regina Leonard

Regina Leonard

If you have worked in an operating room since completion of this program, please sign below if I may contact your first operating room supervisor.

My name is: _____

Date of employment: _____

Name of supervisor: _____

Hospital name: _____

Hospital address: _____

_____

APPENDIX D

Correspondence - Supervisors

10731 - 65 Avenue
Edmonton, Alberta
T6H 1V5
December 9, 1985

Dear Supervisor,

My name is Regina Leonard. I am employed as an Operating Room Nursing Instructor at the University of Alberta Hospitals. I am at present completing my Masters in Educational Administration at the University of Alberta, Edmonton. As a topic for my thesis, I have chosen to conduct a follow-up study of the graduates of the Fundamentals in Operating Room Nursing Program (F. O. R. N. Program). This is a 12 week program offered at the University of Alberta Hospitals to Registered Nurses who wish to develop basic theoretical and clinical skills in Operating Room Nursing. The program is comprised of a one-third theory base with two-thirds clinical practice.

Your name was submitted to me by a graduate of this program as being her first supervisor following graduation. See addendum to letter for graduate's name(s).

The purpose of this study is to obtain information which may be helpful in guiding future program revision and planning activities. Part one of the study consisted of a graduate follow-up. Each graduate received a questionnaire which addressed her educational background, perceptions of the program, post-program employment, and continuing education activities. Part two of the study consists of obtaining input and information from you, the supervisor of the graduate(s).

The enclosed questionnaire addresses (1) the relevance you place on selected skills and qualities of "junior" Operating Room Nurses, and (2) your perception of how well the graduate(s) of the F. O. R. N. Program performed the skills and displayed the qualities during the first three months of practice following graduation.

SUPERVISOR
Page 2
December 9, 1985

This study is not intended to be an individual personal evaluation of the graduate, but rather a general overall response to graduates' basic preparation for Operating Room Nursing. Since no study has been done, to date, you have the opportunity for input into future graduate preparation, program revision, planning, and improvement.

At this time, I am requesting that you complete the enclosed questionnaire. Your reply will be confidential, no one will be identified without permission; and your response will not be used for purposes other than this study. If you do not wish to participate in the study, please return the blank questionnaire to me.

Copies of the completed study will be available at the Education Library, University of Alberta and at the Alberta Association of Registered Nurses Library, Edmonton, Alberta by September, 1986.

Thank you for your time and anticipated interest in this study. It takes approximately 20 minutes to complete the questionnaire. Please return the questionnaire to me in the enclosed envelope by Thursday, December 19, 1985.

Sincerely,

Regina Leonard

RL:je

encs.

10731 - 65 Avenue
Edmonton, Alberta
T6H 1V5
December 9, 1985

Ms.
Operating Room

Dear Ms.

Your name was submitted to me by the following graduate(s) of the Fundamentals in Operating Room Nursing Program (F. O. R. N. Program). The starting date of employment is included as well.

This is not intended to be an individual evaluation, but rather a general response to graduate preparation for employment.

NAME EMPLOYMENT DATE

APPENDIX E

Questionnaire - Supervisors

Fundamentals in Operating Room Nursing Program
(F. O. R. N. Program)

Follow-Up Study Questionnaire - Supervisors

Please answer all questions by circling the number on the right of the most appropriate response, and/or by providing information and comments as indicated.

YOUR RESPONSES WILL BE KEPT CONFIDENTIAL.

Please do not write in this space

1
1-3

1. The term which best describes your position is:

Area Supervisor: Management of entire O. R. Department	1	4
Unit Supervisor: Management of one or more specific surgical areas within O. R. Department	2	
Other. Please specify _____	3	

2. Length of time in above position is:

Less than one year	1	5
1 year to 2 years, 11 months	2	
3 years to 5 years, 11 months	3	
More than 6 years	4	

3. Number of staff for which you are directly responsible during a shift is:

1 to 3	1	6
4 to 6	2	
7 to 10	3	
More than 10. Please specify _____	4	

4. Number of F. O. R. N. Program graduates who are on staff in your operating room is:

1 to 3	1	7
4 to 6	2	
7 to 10	3	
More than 10. Please specify _____	4	

5. Have you taken a post R. N. Operating Room Program?

Yes	1	8
No	2	

Comments:

Questions 6 through 52 require two (2) responses.

Column A addresses the relevance you place on each of the selected skills/qualities, in a "junior" staff member.

Column B asks your perception of how well the graduate of the F. O. R. N. Program performed the skills/displayed the qualities.

Please answer all questions by circling the most appropriate response on the right.

Column A

Not Applicable	1	Not necessary for role
Irrelevant	2	Unrelated to role
Relevant	3	Applies in some aspects of role
Very Relevant	4	Applies in most aspects of role
Extremely Relevant	5	Absolutely necessary in role

Column B

Not at all	1	Never
Poorly	2	Below average standards
Somewhat	3	Maintained average standards
Very Well	4	Above average standards
Extremely Well	5	Exceptional

Skills	COLUMN A Please indicate the relevance you place on each skill (junior staff member)					COLUMN B How well did the F. O. R. N. Program graduate perform skills					Please do not write in this space
	Not Applicable	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Not at all	Poorly	Somewhat	Very Well	Extremely Well	
6. Assesses patient's needs	1	2	3	4	5	1	2	3	4	5	9 - 10
7. Applies principles of asepsis	1	2	3	4	5	1	2	3	4	5	11 - 12
8. Checks supplies for sterility indicators	1	2	3	4	5	1	2	3	4	5	13 - 14
9. Follows scrubbing, gowning, gloving procedures	1	2	3	4	5	1	2	3	4	5	15 - 16
10. Prepares sterile set-up for cases	1	2	3	4	5	1	2	3	4	5	17 - 18
11. Applies surgical procedure definitions	1	2	3	4	5	1	2	3	4	5	19 - 20
12. Assures surgeon's preferences on set-up	1	2	3	4	5	1	2	3	4	5	21 - 22
13. Correctly identifies instruments	1	2	3	4	5	1	2	3	4	5	23 - 24
14. Correctly hands instruments	1	2	3	4	5	1	2	3	4	5	25 - 26
15. Anticipates surgical team's needs	1	2	3	4	5	1	2	3	4	5	27 - 28
16. Applies positioning principles	1	2	3	4	5	1	2	3	4	5	29 - 30
17. Applies prepping principles	1	2	3	4	5	1	2	3	4	5	31 - 32
18. Applies draping principles	1	2	3	4	5	1	2	3	4	5	33 - 34
19. Uses equipment appropriately	1	2	3	4	5	1	2	3	4	5	35 - 36

Skills	COLUMN A Please indicate the relevance you place on each skill (junior staff member)					COLUMN B How well did the F. O. R. N. Program graduate perform skills					Please do not write in this space
	Not Applicable	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Not at all	Poorly	Somewhat	Very Well	Extremely Well	
20. Follows cardiac arrest procedure	1	2	3	4	5	1	2	3	4	5	37 - 38
21. Assists anaesthetist as necessary	1	2	3	4	5	1	2	3	4	5	39 - 40
22. Pre-operatively visits patient	1	2	3	4	5	1	2	3	4	5	41 - 42
23. Communicates visit results to health team	1	2	3	4	5	1	2	3	4	5	43 - 44
24. Post-operatively visits patient	1	2	3	4	5	1	2	3	4	5	45 - 46
25. Performs surgical count	1	2	3	4	5	1	2	3	4	5	47 - 48
26. Completes documentation	1	2	3	4	5	1	2	3	4	5	49 - 50
27. Applies pneumatic tourniquet by procedure	1	2	3	4	5	1	2	3	4	5	51 - 52
28. Prepares electrosurgical equipment	1	2	3	4	5	1	2	3	4	5	53 - 54
29. Prepares sutures for use	1	2	3	4	5	1	2	3	4	5	55 - 56
30. Cares for specimens	1	2	3	4	5	1	2	3	4	5	57 - 58
31. Cares for patient in recovery room	1	2	3	4	5	1	2	3	4	5	59 - 60

Qualities	COLUMN A Please indicate the relevance you place on each quality (junior staff member)					COLUMN B How well did the F. O. R. N. Program graduate display qualities					2/1-3 Please do not write in this space
	Not Applicable	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Not at all	Poorly	Somewhat	Very Well	Extremely Well	
32. Acts as patient advocate	1	2	3	4	5	1	2	3	4	5	4 - 5
33. Gets along well with others	1	2	3	4	5	1	2	3	4	5	6 - 7
34. Works as team member	1	2	3	4	5	1	2	3	4	5	8 - 9
35. Eager to learn	1	2	3	4	5	1	2	3	4	5	10 - 11
36. Makes routine decisions	1	2	3	4	5	1	2	3	4	5	12 - 13
37. Plans ahead (case to case)	1	2	3	4	5	1	2	3	4	5	14 - 15
38. Organized	1	2	3	4	5	1	2	3	4	5	16 - 17
39. Punctual	1	2	3	4	5	1	2	3	4	5	18 - 19
40. Takes initiative	1	2	3	4	5	1	2	3	4	5	20 - 21
41. Has positive attitude toward work	1	2	3	4	5	1	2	3	4	5	22 - 23
42. Is dependable	1	2	3	4	5	1	2	3	4	5	24 - 25
43. Adaptable to non-routine situations	1	2	3	4	5	1	2	3	4	5	26 - 27
44. Willing to teach others	1	2	3	4	5	1	2	3	4	5	28 - 29
45. Accepts constructive criticism	1	2	3	4	5	1	2	3	4	5	30 - 31
46. Gives constructive criticism	1	2	3	4	5	1	2	3	4	5	32 - 33
47. Communicates with team members	1	2	3	4	5	1	2	3	4	5	34 - 35

Qualities	COLUMN A Please indicate the relevance you place on each quality (junior staff member)					COLUMN B How well did the F. O. R. N. Program graduate display qualities					$\frac{2}{1-3}$ Please do not write in this space
	Not Applicable	Irrelevant	Relevant	Very Relevant	Extremely Relevant	Not at all	Poorly	Somewhat	Very Well	Extremely Well	
48. Remains within nursing staff limitations	1	2	3	4	5	1	2	3	4	5	36 - 37
49. Follows operating room policy	1	2	3	4	5	1	2	3	4	5	38 - 39
50. Seeks guidance as necessary	1	2	3	4	5	1	2	3	4	5	40 - 41
51. Evaluates own performance	1	2	3	4	5	1	2	3	4	5	42 - 43
52. Seeks feedback on performance	1	2	3	4	5	1	2	3	4	5	44 - 45

Please do not write in this space

53. How would you rate the overall F. O. R. N. Program graduate's performance with that of staff trained on the job?

Performance is superior	1	46
Performance is about the same	2	
Performance is inferior	3	

54. Do you feel there is a need for this program?

Yes	1	47
No	2	

Comments:

55. Do you perceive a need for a more advanced program for operating room nurses?

Yes	1	48
No	2	

Comments:

56. If yes, would you prefer a:

Hospital-based Program - Certificate	1	49
University-based Program - Credit toward B. Sc. N.	2	
Other. Please specify _____	3	

57. Do you agree with the A. A. R. N. statement that "a B.Sc.N. should be a requirement for entry into practice in the future"?

Yes	1	50
No	2	

Comments:

58. Do you have any suggestions or recommendations which would assist in preparing future F. O. R. N. Program graduates for practice and employment?

Yes	1	51
No	2	

Comments:

Please feel free to make any additional comments, and/or to elaborate on any of the points in the questionnaire.

Thank you,

Regina Leonard

APPENDIX F

Summary of Open-Ended Comments - Graduates

APPENDIX F

Summary of Open-Ended Comments - Graduates

The comments received are summarized as follows:

1. The program or prior experience should be a prerequisite for O. R. employment; the O. R. is so specialized.

2. I found the program to be thorough, enjoyable and a very good provider of a knowledge base.

3. I would love to see it offered for University credit.

4. Add ear, nose and throat surgery to the rotations.

5. What little was lacking in the program I picked up in the course of working.

6. Suggest more opportunities to organize a complete case preparation; this would aid in the transition process from student to staff.

7. Others had unrealistic expectations of me during transition from student to staff.

8. Delete pre-study anatomy package; too detailed and very little relevance.

9. I could have used more circulating experience as a student.

10. More emphasis on perioperative visits to the patients.

11. Overall a very positive experience; I would recommend the program to others.

12. Very beneficial course; I think I would have benefited more if I had had some previous O. R. experience.

13. More theoretical review after clinical experience; eg. suture use after a few weeks in clinical.

14. I haven't worked in an O. R. since the program but have applied many of the principles in my area of work; I do not regret taking the program.

15. The individual student presentations were my biggest complaint; most wasted my time they were so poorly done.

16. While taking this course I found that I missed the patient-nurse contact of the wards; I enjoyed the challenge of O. R. nursing but have found more challenge and satisfaction elsewhere; O. R. nursing is not for everyone.

17. More emphasis on how to manage a room would be helpful; it is expected as a staff member.

18. The information given in this course is information an O. R. nurse should know; it was not given in nursing school.

19. I have since decided I am not an O. R. nurse; I now work general duty.

20. Very stressful due to the short length and high volume of information to be absorbed; everyone in my group took at least one mental health day.

21. Felt I was treated as a student nurse and not as an R. N. with nursing experience.

22. The doctors seemed to know very little about the course.

23. I never would have worked in O. R. if I hadn't taken the course; it gave me adequate knowledge of why I was doing what I was doing, and the confidence to do it.

24. Very beneficial course for nurses returning to small hospitals.

25. I'm really enjoying the O. R.

26. Re A. A. R. N. statement: especially in regards to O. R. nursing--obviously one doesn't even need to be a nurse to work in this environment; I work with several O. R. technicians; two years is sufficient to train as a bedside nurse; if anything was to change a six month practicum would be beneficial; I find B. Sc. N. nurses very limited in skills, and they need to work in a realistic setting.